Gleanings in Bee Culture

Established 1873

CONTENTS

February, 1941

Honey Markets	68- 69
The Editor's Sojourn in Florida—E. R. Root	73- 75
Honey for Babies—H. H. Root	76- 77
National Advertising of Honey—T. W. Burleson	78- 80
The Honey Publicity Program—Mrs. Harriett M. Grace	80
The Beekeepers' Friend—Mrs. Benj. Nielsen	81- 84
Insulation vs. Little or No Insulation of Hives During Winter—E. R. Root	85- 86
Wintering Bees in Canada—C. B. Gooderham	87- 89
A Beginner's Observations on Caucasians— C. O. A. Kramer	90- 91
Bees and Bombs—H. E. Norman	91
Marketing Honey and the Bee Entrance—A. Shallard	92
Betty Likes Her Honey—C. H. Huey	92- 93
Always Plant for Nectar—C. Edwin Swenson	93- 94
4-H Bee Club Members Achieve Fine Record —R. M. Smith	94
Just a Day's Work—John G. Jessup	94- 95
Second Glances—C. M. Isaacson	95
Radio and Movie Star Beekeepers—E. R. Root	96
Editorials	97- 99
Just News	100
Thomas Atchison	101
Cecil E. Heard	101
From North, East, South and West	102-108
Heads of Grain from Different Fields	109
Asked and Answered	110-111
Talks to Beekeepers—M. J. Deyell	112-113
Spinster Jane Says—	114
American Honey Institute News Notes	115

Subscription Rates—United States, one year, $1.00; two years for $1.50; three years for $2.00. Single copy, 10 cents. Other countries, 25c per year additional for postage. Discontinuance—Subscription stopped on expiration. No subscriber will be run into debt by us for this journal. Change of address—Give your old address as well as the new and write the name to which the journal has heretofore been addressed. Remittance should be sent by postoffice money order, bank draft, express money order or check. Contribution to Gleanings columns solicited; stamps should be enclosed to insure return to author of manuscript if not printed. Advertising Rates—Advertising rates and conditions will be sent on request. Results from advertising in this journal are remarkably satisfactory. Advertisers' Reliability—While the publishers do not guarantee advertisements in this journal, they use utmost diligence to establish in advance the reliability of every advertiser using space in this journal.

Entered as second class mail matter at the Postoffice at Medina, Ohio, Published monthly.

The A. I. Root Company, Publishers, Medina, Ohio

E. R. Root and M. J. Deyell, Editors; M. W. Hobart, Assistant Editor; H. H. Root, Associate Editor; D. C. Babcock, Circulation Manager.

A Z LIBRARY

ROOT SERVICE From CHICAGO

The beginning of a

New Era

Publicity of honey with its good results—people more honey-conscious—and the promise of greatly increased advertising of honey be-speak larger reward for honey producers.

The world wants production from those who can produce.

Beekeepers may add greatly to the stores of health-giving foods.

Make ready for a period of better years. Root Quality supplies with correct lasting qualities will serve you best.

Let us see your list of supplies needed for quotation of prices. Ask for our new 1941 catalog.

A. I. Root Co. of Chicago
224 WEST HURON STREET
Chicago, Illinois

Your wax worked into

Unexcelled SCHMIDT'S Economy Foundation

as low as 10c per pound in 100 pound lots.

SATISFACTION UNCONDITIONALLY GUARANTEED.

Write for complete price list and shipping tags to

Oscar H. Schmidt
Rt. 4, Bay City, Mich.

Lower Prices on Tin Cans and Pails

2½-lb. cans,	24 to carton	$1.08
2½-lb. cans,	100 to carton	3.80
5-lb. pails,	12 to carton	.90
5-lb. pails,	50 to carton	3.10
10-lb. pails,	6 to carton	.70
10-lb. pails,	50 to carton	4.60

Write for special prices on quantity lots

No change in other container prices.

The A. I. Root Co.

12 W. 21st St.
NEW YORK CITY

To New York State Beekeepers:

An independent dealer in beekeepers' supplies once told us, "I sell other makes of foundation to customers who want something cheap but use Root's 3-PLY exclusively in my own apiary". You, too, can save the trouble of weeding out sagged, crooked, broken or patched up combs by using Root's 3-PLY for your brood and extracting combs and the saving will pay many times over the slight extra original cost of 3-Ply.

If you have beeswax that you want made into Root's foundation, we have a special plan that will save you money. Write for particulars.

Don't forget we render old combs and cappings.

Why not give us a chance to quote on your complete beekeeping requirements?

A. I. Root Co. of Syracuse

Midland Ave. and Tallman St.
SYRACUSE, N. Y.

Serves You Best

FREE

descriptive circular on any magazine listed.

MORE PROFIT . . . MORE PLEASURE will be yours if you receive each month the publication that caters to your hobby or special interest.
These magazines keep you informed, give you ideas, put you in touch with others who have the same interest that you have. All are monthlies.

Per Year
$ .25 Poultry Item
.25 Leghorn World
.25 Plymouth Rock Monthly
.25 Rhode Island Red Journal
1.00 Cackle & Crow, the poultry paper
.25 Dixie Farmer
.50 American Turkey Journal
.50 Pacific Poultryman
.50 Sou. Calif. Rancher
1.00 The Pacific Fancier
.75 American Farm Youth
1.00 American Bee Journal
1.00 Beekeepers' Item
1.00 Gleanings in Bee Culture
1.50 American Pigeon Journal
1.00 American Rabbit Journal
1.00 Small Stock (rabbits, cavies, etc.)
.50 Rabbit Monthly (comm.)
1.00 Standard Rabbit Journal
1 00 American Fur Breeder
2.00 Amer. Natl. Fur & Market Journal
1.00 Belgian (Horse) Journal
.50 Dairy Goat Journal
1.00 Angora (Goat) Journal
2.00 Goat World
1.00 Hog Breeder (all breeds)
.50 Spot. Poland China Bulletin
1 00 Amer. Hampshire Herdsman
1.00 Sheep Breeder
1.00 The Sheepman
.50 Wool Sack (wool growers)
1.00 Milking Shorthorn Journal
1.00 American Cattle Producer

Rush your order today. All orders are acknowledged by return mail and your subscription is started at once. Send check, money order, bill, coin or stamps.

SEND NO MONEY: Send us your order on a postcard and we will bill you for it if you prefer.

MAGAZINE MART
Dept. GB La Grange, Ill.

Buy Early for 1941

Let us quote you now for your total needs for this spring. Top price paid for beeswax, cash or trade.

For Root's Goods in Michigan write

M. H. Hunt & Son
Lansing, Michigan

BEEKEEPERS ITEM

Serving the beekeeping industry for a quarter century without bias or prejudice. "The forum for the thoughtful." One year, $1.00; two years, $1.50; sample copy, 3c stamp.
With Gleanings it provides a combination that covers the beekeeping field.
Both magazines for one year, $1.75.

BEEKEEPERS ITEM
P. O. Box 687 San Antonio, Tex.

2 Years $1.50

American Bee Journal — monthly: published and edited by beekeepers for beekeepers. Full of pictures and tips on care of bees and selling of honey.

—SAMPLE COPY FREE.

$1.00 a year, 2 years $1.50 in U. S. and Canada. Combined with Gleanings in Bee Culture, both magazines, **ONE YEAR, $1.60.** This offer good only in the United States. Address—

American Bee Journal, Hamilton, Ill.

The Monthly Honey Market

U. S. GOVERNMENT REPORT

Information from Producing Areas (first half of January).

California Points: Southern California—Rain has fallen over the entire area, bringing the season's total to 8 inches over much of Southern California. The ground is well soaked with moisture. The weather has been mild and plant life shows good condition and prospective good yields of nectar, except oranges, many of which are now in flower earlier than normal, tending to cut down the bloom at the normal period. Bees in the hills are inactive, but bees in orchard districts are bringing in enough pollen and nectar from mustard and eucalyptus so that brood is being started. Many colonies average three combs of brood. The eucalyptus flow is past its peak. Alfilaria plants are starting, and from present indications the growth should be the best in years. Demand for honey has been moderate, with prices about steady. Orders for future shipments of honey have been scarce, most sales being for early delivery. Although little White honey is reported available, an ample supply of other grades is said to be on hand. Early prospects for the 1941 honey season are considered very good from the standpoint of moisture and general weather conditions. Sales reported in case lots or more at Southern California delivery points, per lb.: Orange, Extra White, very few sales 5¼c, White 4½c-4¾c; Sage, Extra White to Water White 5-5½c, White 4¾-5c; Sage-Buckwheat, Extra Light Amber $5.00-5.25 per case of 120 pounds, Light Amber $4.70-5.00 per case. Beeswax has been in good demand and the market has held about steady, with beekeepers receiving mostly 21-23c per lb. for good quality bright yellow wax, and mostly 20c per lb. for darker wax, delivered Los Angeles.

Central California—Frequent rains reported, which were liberal to heavy over the whole area. Fogs have been below normal. Total rainfall for the season to date is considerably greater than that reported one year ago. The moderate temperatures accompanying the rains promoted the growth of early vegetation and prospects for the 1941 honey crop have been greatly improved. Colonies generally have good clusters of young bees, heavy stores of honey and little or no brood. It has been too cold for much flying, but eucalyptus, manzanita, and mustard are reported in bloom. Indications are for an early spring. Some increase in market activity reported toward the middle of the month and local dealers are starting to replenish supplies that were running low. Because of improved prospects for the coming season, some beekeepers are offering honey of the 1940 crop more freely. Prices show little change. Sales by beekeepers in ton lots or more, per lb., delivered Bay cities—Light Amber Cotton 3-3¼c; Extra Light Amber Blue Curl 3½c; White Mixed Orange-Sage 5¼c; Light Amber Mixed Wild Flowers 3c. Sales delivered Interior Valley points—Light Amber Cotton 3c; Water White Sage 5c; Extra White Orange 4⅞c; Light Amber Spikeweed 3c. Sales at country points—San Joaquin Valley Light Amber to Extra Light Amber Cotton-Alfalfa $3.85-4.00 per per case of 120 pounds.

SUMMARY—This period has seen abnormally high temperatures which have permitted bees to fly, even in many of the northern States. In consequence, colonies continue to come through the winter in better condition than usual and present prospects are for lighter winter losses than normal. Precipitation has been widespread, with some snow in the northern States, and with much rainfall during the early part of the month. Melting snows were able to soak into the ground because so little of the ground in the North was frozen, and

TOO LATE TO CLASSIFY

FOR SALE—Cheap, 265-60's used once. Ellsworth Apiaries, Tarkio, Mo.

WANTED—Amber and clover honey. Fairland Apiaries, 2 Acacia, Dayton, O.

WHITE CLOVER honey, new 60's, case or car. Wesley Johnston, Port Hope, Mich.

LABELS—NEW DESIGNS. Samples free. Thoughtgift, 50 Presque, Rochester, New York.

MIX handful my cleone honey plant seed in corn planter. Write. Arthur Bissinger, Prescott, Iowa.

PURE RASPBERRY HONEY—10-lb. tin $1.95, postpaid; 60-lb. tin, $4.20. Frank Reith, Boyd, Wisconsin.

NORTHERN CALIFORNIA package bees and queens; first quality three-banded Italians. Geo. E. Smith, Rt. 2, Yuba City, California.

FOR SALE—300 colonies of bees located in northwest Florida. Inspection certificate furnished at time of sale. M. C. Berry, Box 684, Montgomery, Ala.

UNEXCELLED QUALITY Italian bees and queens, bulk or package. Large or small quantities. Fast service, fair price. Satisfaction guaranteed. Sowhatchee Apiaries, Hilton, Ga.

WANTED—Industrious young man of good health and habits to work with bees. State age, weight, height, experience, and wages expected, room and board provided. M. L. Winn, King Ferry, N. Y.

FOR SALE—We accumulate bee supplies at our warehouses, slightly shopworn and fully serviceable, but discontinued for lack of sale. Write for complete bargain list. G. B. Lewis Company, Watertown, Wisconsin.

ITALIAN BEES AND QUEENS

Caged or loose queen packages.

Young laying 1941 queens ready for shipment April 1st.

Citronelle Bee Co.

Citronelle, Alabama

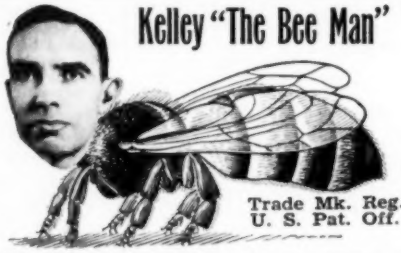
throughout the country as a whole prospects for the coming season's nectar-bearing plants are exceptionally good. Already early vegetation has been started in California valleys and beekeepers are looking forward to a good crop of honey from almost all nectar sources in that State. Rainfall in the desert areas of Southern California and Arizona has been better than usual, suggesting a probable crop from desert plants; and the outlook in South Texas is better than it was a year ago. Throughout the White Clover Belt, which lost bees so heavily last winter, colonies are coming through satisfactorily, with occasional flights, though in many yards it appears that early feeding may be advisable.

As is customary immediately following the Christmas Holidays, demand for large lots of honey has not been heavy, but local sales in small lots have been better than normal for the season, and throughout the East commercial beekeepers are already anticipating a shortage of white honey before the close of the season. In the Mountain States, and especially in California, there appears to be a present surplus of darker grades of honey but white honeys are rapidly becoming scarce. The embargo on honey shipments to Canada, effective December 2, 1940, has been at least partly responsible for stopping the upper price trend for honey which had previously been noted in the White Clover Belt, which had previously shipped numerous lots of honey to Canadian buyers. Beeswax continues in good demand, with prices a couple of cents per pound higher than they were in the fall. Comb honey is nearly sold out but good demand for comb is reported in several areas.

Monthly Report of Honey Producers

Early in January we sent the following questions to honey producers 1. What percent of the honey produced in your locality has already left the hands of the producers? Give answer in per cent. 2. At what price has honey been sold or contracted for, if any, in large lots (carload or less) in your locality during the past month for (a) extracted per pound? (b) comb honey, Fancy and No. 1, per case? 3. What are prices when sold to grocers in case lots of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per case? 4. What is the retail price to consumers in your locality of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per section? 5. How is honey moving on the market in your locality? Give answer in one word, as slow, fair or rapid. 6. How does the number of colonies to be wintered in your locality compare with that of last year? Give answer in per cent. 7. What is your estimate of prospects for a normal honey crop in 1941, considering the present condition of the bees and the honey plants? Give answer in per cent of average crop for your locality. The answers received are tabulated as follows:

	State.	Name.	1. Per cent Sold	2. Large Ex.	2. Lots Comb	3. To Ex.	3. Grocers Comb	4. To Consumers Ex.	4. To Consumers Comb	5. Movement	6. Colo. Wintered	7. Est. 1941 crop
7	SE-Ala.	(H. C. Short)	90			.55		.65		Fair	100	100
7	S-Ala.	(J. C. Dickman)	.			.35		.40		Slow	100	100
8	B. C.	(A. W. Finlay)	80	.10½		.70		.90		Fair	100	100
6	S-Calif.	(L. L. Andrews)	40					.48	.22	Fair	100	100
9	S-Calif.	(Geo. Larinan)	60	.04½						Fair		
8	C-Calif.	(Davis Bros.)	60	.03⅞				.42	.20	Fair	100	100
6	SE-Colo.	(Otis E. Adcock)	25	.04	0	.35	3.00	.45	.18	Slow		100
10	E-Conn.	(Allen Latham)	75			.75	5.00	1.00	.28	Fair	95	100
11	C-Fla.	(Harry Hewitt)	90			.50		.65		Fair	100	100
9	SE-Ga.	(J. J. Wilder)		0		.40		.50		Fair	115	100
6	NC-Ills.	(A. L. Kildow)	75	.04¾	2.50	.45	2.75	.50	.15	Fair	90	95
6	S-Ills.	(Carl E. Killion)	80	.06	3.10	.45	3.38	.65	.20	Fair	75	80
7	NC-Ind.	(T. C. Johnson)	75			.40	3.00	.50	.18	Slow	100	
8	NW-Ind.	(E. S. Miller)	70			.45	3.00	.60	.20	Slow	60	90
4	W-Iowa	(E. G. Brown)	95	.04½		.44		.49	.15	Fair	100	110
7	N-Maine	(O. B. Griffin)	65				4.75		.25	Slow	100	100
9	S-Mich.	(Floyd Markham)	60	.05		.40	2.75	.65	.20	Fair	100	100
5	C-Mich.	(E. D. Townsend)	80	.05½						Slow		
11	E-Minn.	(Floyd W. Ray)	80	.04¾		.35		.39		Fair	100	100
11	W-Minn.	(B. L. Morehouse)	80	.05½		.42		.49		Fair	85	95
6	W-Nev.	(Geo. G. Schweis)		.04	2.50	.35	3.00	.45	.20	Fair	100	100
9	W-N. M.	(C. A. Baltzley)	20	.05		.40		.60	.21	Slow	100	100
9	W-N. Y.	(Adams & Myers)				.45	3.60	.65	.25	Fair	90	100
8	NW-N. Y.	(Geo. B. Howe)	60		3.60	.50		.65	.20	Fair	100	90
6	C-N. Y.	(F. W. Lesser)	60	.06½						Fair	90	100
9	E-N. D.	(M. W. Cousineau)		.04¾	0	.33	0	.42	0	Slow		
5	C-Ohio	(R. D. Hiatt)	60			.49		.63		Slow	90	100
10	NC-Okla.	(C. F. Stiles)	80			.45	3.50	.65	.18	Fair	95	100
8	C-Penn.	(Harry Beaver)	70			.50		.60		Rapid	100	
6	SE-Penn.	(D. C. Gilham)	50			.70	4.25	1.00	.25	Fair	85	80
7	W-S. C.	(E. S. Prevost)	100			.75		.90		Fair	100	80
8	SE-S. D.	(J. F. Norgren)	60	.05		.38		.45	.12	Fair	100	95
7	E-Tenn.	(W. L. Walling)	100			.75		1.00		Slow	110	100
7	C-Texas	(T. A. Bowden)	75			.45		.55		Fair	100	100
6	S-Texas	(H. B. Parks)	70			.45		.55		Fair	95	100
14	N-Utah	(W. H. Hendricks)				.40		.45		Fair	125	100
8	W-Vt.	(Phillip Crane)	95		3.50	.65	4.00	.80	.30	Fair	100	100
8	S-Va.	(T. C. Asher)	60			.40	3.60	.59	.20	Fair	90	95
9	SE-Wash.	(Ryon R. Isbell)	25	.05½		.39		.48		Slow	95	100
4	N-W. V.	(W. C. Griffith)	100					.45	.18	Slow	100	100
4	SE-Wisc.	(N. E. France)	5	.05		.35		.40	.18	Fair	90	
11	N-Wyo.	(Earl C. Reed)	75			.40		.48		Fair	100	80



?

Kelley's 1941 Catalog

lists many items not found in other bee supply catalogs. Is not it worth a 1c postal card to find out?

THE WALTER T. KELLEY CO., Paducah, Ky.
Manufacturers of Bee Supplies.

Get Our 1941 Prices

24-Hour Service

Root QUALITY
BEE SUPPLIES

HEADQUARTERS
For 3-Ply Foundation, Quality Hives, Triple-Locked Corner Frames, Sections, Veils, Smokers, etc.

See Your Root Dealer

A. I. ROOT CO. OF INDIANAPOLIS
121 N. Alabama St.

HARDY *Fruit* TREES

AS LOW AS 8 3/4 ct EA.

Here's your opportunity to save real money on CHOICE VARIETIES of Apple, Peach, Pear and Plum Trees. All hardy, northern grown stock, GUARANTEED TO PLEASE. Write for special prices and FREE catalog now.

STAHELIN'S NURSERY, BOX 24, BRIDGMAN, MICH.

Beeswax Wanted

We pay the highest prices for good yellow beeswax.
Write for prices and tags.

We also have some openings for Beekeepers who wish to become Dealers. Write for Particulars.

W. T. Falconer Mfg. Co.
Falconer, N. Y.

LOTZ Bee Supplies!

The answer to 1941 Beekeeping Requirements

Our new 1941 catalog is now available for you. In it you will find a complete line of best quality Bee Supplies.
If you are not on our Mailing List, send for your free copy at once and place your orders early. They will receive our well known reliable service and guaranteed satisfaction.

August Lotz Company
Boyd, Wisconsin

New 1941 Catalog Now Ready

MANUFACTURERS OF

Honey Extractors, 10 different sizes, styles and capacities, to meet any volume requirement.
Capping Melters, Storage Tanks, Strainers, Wax Presses, Uncappers, and all equipment for handling honey.
Big Honey Production using our equipment show hired help extracting costs at less than 10c per 100 pounds. This is a factor to consider with low price honey.
A complete line of supplies for beekeepers is offered. Ask for a catalog.

A. G. WOODMAN CO., Grand Rapids, Michigan

BOLENS GARDEN TRACTORS

Write for description new models. Nine sizes—Power Hoes at $79.50 to heavy duty Hi-Wheels pulling 10" and 12" plows. Equipment for cultivating, seeding, plowing, spraying, mowing, snow removal, etc. Time Payment Plan. BOLENS. 2119 Park St., Port Washington, Wis.

NEW SUPER-QUALITY KITSELMAN FENCE

SAVE MONEY on Farm, Poultry, Lawn Fence, Steel Posts, Gates, Barbed Wire, Paints, Steel and Asphalt Roofing, Hay Tools, Stock Feeders and Founts, Poultry Supplies and other farm needs! **WE PAY FREIGHT.** Write today for new low prices!
KITSELMAN BROTHERS
Dept. 21 **Muncie, Indiana.**

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

Root QUALITY BEE SUPPLIES

Norfolk, Va.

516 Main St.

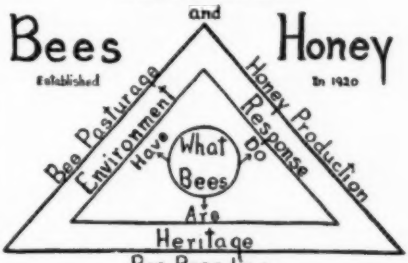
Fine Stock of Bee Supplies

Get our 1941 prices on your requirements.

Larger improved quarters with plenty of free parking space on Plume Street.

The A. I. Root Company
Phone 21750

FRONTIER



American Bee Breeder's Record
Since 1918

A 44-page TRADE MAGAZINE
serving America West of 100°
Featuring Triple Phases of **Bee Life**
Heritage—
Environment—
and **Response—**
with regular Departments devoted to each phase—
Bee Breeding—
Bee Pasturge—
Honey Production and Utilization
Published monthly, $1.00 the year
circulating "From Coast to Coast"
Sample Copy Free
RALPH BENTON, Editor
Rivera, California

Twenty Years

Saving Money Year by Year

Twenty years ago, from the first Dadant's Crimp Wired Foundation that was ever sold, this comb was drawn to cradle its first share of bees for the harvest. Since then it has held steadily to its job of service; as brood comb; as honey comb. Through extraction after extraction, through heat and cold; through rough handling and migrations; saving money for its owner each year it lives. Long after less sturdy combs from cheaper, poorer made material, have been discarded or rendered useless by the severe demands of modern beekeeping, this everlasting comb, will still be doing its bit to reduce the cost of honey production.

Use Dadant's Crimp Wired Foundation—For Everlasting Combs.

Dadant & Sons

Hamilton, Illinois

Vol. 69
No. 2

Gleanings
in Bee Culture

February
1941

The Editor's Sojourn in Florida

A Tale of a Snake Dancing on its Tail; Ten Thousand Square Miles of Bee and Cattle Country

By E. R. Root

Believe it or not, I have crossed the Atlantic Ocean in three hours. I have been driving at the rate of 70 miles an hour. Two of the pictures, Figs. 1 and 2 next page, were taken at that speed. I have seen a Florida snake dance on his tail. I have driven twice over the Everglades and to Key West. The natural inquiry, after reading the foregoing, "is E. R. telling whoppers or making much ado about nothing"? To save my reputation, read further so I can explain.

I drove over a narrow neck of the Atlantic from the mainland of Florida to Key West, a distance of 100 miles. It is one of the most wonderful drives in the world,—a glide over concrete bridges with nothing but water on either side, interspersed with keys or islands.

The Tale of a Snake Dancing on His Tail

I'll leave you to judge. We were driving, at the rate of seventy miles an hour, some of the time over one of the beautiful roads in the Everglades. Thump! What was that? We ran over something. We backed up. There stood a long snake, not curled like a rattler, but with head erect about a foot. We backed beyond him; he still stood defiant. We got out of the machine, threw stones at him; up into the air he went, and kept on jumping, up and down, and every one would declare that he was dancing on his tail. One big jump sent us three men jumping into our machine and slamming the door. I said, "Buddy, run over his tail, and hold him under the tire until we can investigate". He was a dangerous water viper. We got out of the machine, picked up stones, and actually "rocked him to sleep",—at least he was "asleep" when we left.

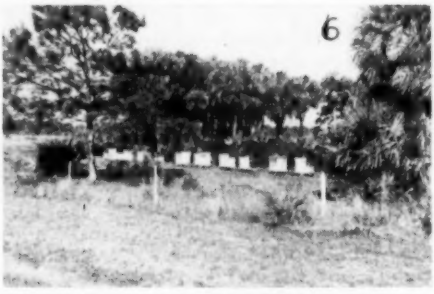
10 Thousand Square Miles of Bee and Cattle Country in the Everglades

Look at the Florida map, and you'll see that the distance from Lake Okeechobee to the end of the peninsula, and across the whole state is somewhere around a hundred linear miles each way, or comprising an area of nearly 10 thousand square miles; some of it good bee territory and covered with cattle; and some of it is poor for either cattle or bees.

Thirty years ago I used to describe a Florida cow as looking more like a rail fence with a blanket thrown over it, than like a cow. Her tall hip bones looked like little mountains, and the hollow places in her sides like miniature canyons. In the last ten or fifteen years the Everglades have been drained; once an impassable swamp, now dry land, with occasional wet places. After thousands or millions of years of decaying vegetation on this erstwhile swamp land, the soil now drained, sub-soil moist, much of it black and rich, makes possibly the finest garden

XUM

Some Views of The Everglades



In Figs. 1 and 2, my automobile was going at 70 miles an hour, when these pictures were taken, in the heart of the Everglades on one of the main highways across southern Florida. In Fig. 1, we have on the right and between the irrigating ditch and the highway Australian evergreens that have a beautiful soft dark green foliage. These trees are found on many highways of the Everglades. They furnish a windbreak to the crops. Outside of the row of trees is one of the irrigating ditches that flows from Lake Okeechobee. The water is held in check when needed by a big water gate at the Lake. (See Fig. 5.) Fig. 2 is one of the many highways that crosses the Everglades east and west. The view on the left is wild country unimproved. It consists of pine, saw palmetto, and cabbage palmetto,—all good bee country, as shown in Fig. 3 more clearly. Fig. 3. These trees are sometimes in groups as here shown and in Fig. 6. The honey is not as abundant or of as good flavor as the saw palmetto but it helps out the orange and saw palmetto. Fig. 4 shows one of the great canals to drain the Everglades of Florida from coast to coast. It is these big canals, which, in conjunction with the smaller laterals, that drain what was a swamp but now productive land. In Fig. 5 we have one of the great water gates that lets out the

land in the world. I refer to that portion immediately south, southeast and west of Lake Okeechobee.

After having driven hundreds of miles through the Everglades, back and forth, on two separate trips, I find sleek and plump cattle feeding on native grass; I find occasionally orange groves, saw and scrub palmetto everywhere, and cabbage palmetto in groups, shown in figures 3 and 6. I am told by very good beekeepers that the palmettos are all good yielders of light-colored, fine table honey, which when mixed with some orange makes a flavor equal to any of the northern honey.

Along the drainage and irrigating ditches to and from Lake Okeechobee, is red and black mangrove; likewise a good yielder of honey some seasons. The flavor, though, to a northern consumer, is not as pleasant as that from other Florida sources, particularly a blend of orange and palmetto.

One can see what has happened because of these drainage and irrigation projects, with their great ditches, as shown in figures 4 and 5, by the fact that much of this Everglades country is covered with cattle; and cattle country is usually good territory for bees. The cattle industry has grown so enormously in Florida that this state is now second in production of cattle of all the states in the Union, so I am told.

The Florida Keys

These islands on the skirts or water edges have black mangrove nearly everywhere until one gets to Key West. Key Largo has one bee man who I am told has 500 colonies. Going back over the Everglades, we find several bee men who have a thousand colonies or over

No northern bee man should come down into this country without making a very careful preliminary trip; that there is open territory there can be no doubt. While one bee man reported to me that he had skyscraper colonies one season and produced 29,000 pounds of fine table honey from 200 colonies, that yield is above the average.

Bees can gather honey and pollen, and breed every month in the year. They, therefore, consume much more honey during the off season of the year than bees in the North; so if one should come down into Florida with the idea of going into a permanent location, he would have to figure on smaller colony averages and a number of seasons when it's too dry, or too wet to produce much surplus.

Let me conclude with one important injunction. Don't rush into Florida with your bees without first making a preliminary auto trip. Get a permit to move your bees from your state bee inspector back home, and a permit from the state bee inspector of Florida, of the Plant Board, Gainesville, before making any move. Mr. R. E. Foster can tell you of unoccupied territory. Then after you come, don't get the notion that you are going to make a fortune in honey production until you have spent some years here and have learned how to tide yourself over the off seasons.

It is terribly hot in the Everglades sometimes; but most of the time there are cool breezes from the Gulf or the Atlantic even in summer.

Key West, the furthest south city in the U. S., has the most comfortable climate in the country, winter or summer. The stoves, if any, are very small and seldom used even in winter. If you want to find a real God's country where you almost never shiver go to Key West. Keep bees there? Yes, but the Everglades south of the Lake are better.

water from Lake Okeechobee. This lake now has a big dyke or levee some 30 feet high and as extensive as the levees to hold the Mississippi River in control. In 1935, the waters of Okeechobee flowed over its banks wiping out whole villages and drowning hundreds of people. This can not happen again because the dyke and the control gates as shown will make it impossible. (See Fig. 8.) Fig. 6. We find numerous apiaries like this in groves of cabbage palmetto here and there along the highways. In Fig. 7 we see half grown sunflowers in hundreds if not thousands of acres all around the Lake and away from it. Inbetween the rows are small plants of sunflower just starting and so the continuous growing of the plant is kept up. Sunflower furnishes both pollen and honey. In the same way beans and sugar cane are grown, and beans are an important source of honey in California and probably here. Fig. 8 is a remarkable picture. A big storm was brewing as you will see from the clouds with sun trying to peek through. The white stretch in the foreground and reaching to a tapering back, is the top of the 30-foot levee referred to in Fig. 5. On the left is Lake Okeechobee itself. Unharnessed, it has caused an awful toll of life and property, as mentioned, in 1935; but owing to the aforesaid levee and the water gates it can do so no more. I wish you could have seen the lake as I did. It was impressive.

XUM

Honey for Babies

By H. H. Root

Most infant foods utilize milk in some form, usually condensed or evaporated milk. These forms of milk, as the names imply, have had a large portion of the water removed, usually by heating under vacuum. Ordinarily, condensed milk contains added cane sugar, while evaporated milk is the plain product without the addition of sucrose or any other product.

As is well known, sugar of milk is known as lactose; ordinary sugar is sucrose. Many babies cannot digest sucrose since this sugar has to be inverted before it can be assimilated. The honey industry, fifty years ago, should have pointed out the greater safety of honey in combination with evaporated milk for infant feeding, because honey contains the sugars dextrose and levulose in almost equal proportions. Honey is a safer sweet to use in connection with the lactose of plain evaporated milk. Many of the older doctors do not know this; most of the younger doctors do know it. The medical fraternity in Europe and other countries has known this for years, as evidenced by the fact that honey in these countries plays a much more important part in the feeding of infants and children suffering from mal-nutrition than in this country.

The following extract from "Honey as a Food and Medicine", published by The A. I. Root Co., is very much to the point:

> While it is admitted, of course, that breast milk from a normal mother is the best possible food for human babies, this natural food is often deficient in quality and quantity for the baby, especially as it grows older. It is then that modified cow's milk must be given to take the place of or supplement mother's milk. Various sweetening agents have been used to make the cow's milk come more nearly to the requirements of the human baby. Glucose (dextrose) or dextri-maltose have been the sugars most commonly used for the purpose. Some recent work goes to show that honey, while more expensive than glucose, is much cheaper than dextrimaltose and superior to either for modifying cow's milk. It has been hard to get the medical fraternity to recognize the virtues of honey in infant feeding, but some of the leading physicians and child specialists in this country and Europe are beginning to see the light and are not slow to let their brother physicians know.
>
> Among the first to recommend honey for children was Dr. Paul Luttinger, Bronx Hospital, New York City, and a lecturer on child diseases. He writes a lengthy article on the virtues of honey especially for children, in the New York Medical Journal and Medical Record for August 2, 1922. From it we make the following extracts:
>
> "Honey is indicated in any condition of the intestinal tract where the assimilation of starch or the disaccharides is delayed and where prompt absorption of energy is desired. In constitutional inability to digest starch or other polysaccharides due to lack or diminution of the respective enzymes, honey is a boon indeed. A solution of honey in water (one teaspoon honey to a glass of water) is almost as quickly absorbed as alcohol, and its effect is more lasting.
>
> "The largest part of the honey sugar is fructose (levulose), a levorotatory monosaccharide which seems to have a peculiar affinity for the body cells; thus it is rarely, if ever, found in the urine of diabetic patients. It is more rapidly absorbed than lactose and it has not the disadvantage of undergoing butyric acid fermentation like maltose; hence it does not produce acidosis. Its rapid absorption prevents it from undergoing alcoholic fermentation, and infants fed on honey rarely show signs of flatulence.
>
> "The importance of mineral salts is too well known to need discussion, and although honey contains only small amounts, they are of great value to infants. This is especially true of the iron which human as well as cow's milk contains in exceedingly small quantities. Honey complements this deficiency."
>
> Clarence W. Lieb, M.A.M.D., a child specialist of New York City, in his book, "Eat, Drink and Be Healthy", shows the dangers of refined sugars, and recommends honey and fruit juices instead, especially for children. The cane and beet sugars, he says, require too much digestive energy to convert them to simpler forms for absorption. In fact, he believes they irritate the stomach and retard digestion.

Some good authorities in connection with the honey industry believe that emphasis should be placed mainly on the fact that honey is a good food; that its value, from a health standpoint, should not be emphasized too much. Honey is the only food that carries with it the aroma of the flowers. Honey is a concentrated, energy food, much needed by most individuals under the tiring conditions in the world today. Honey is a delectable food. All this is true; at the same time, we need to point out that honey is a good food for infants and for children. We do not need to advocate honey as a cure-all, necessarily, in pointing out that if honey is a safe food for babies, it is a safe food for adults. Granting that such a food, bearing the breath of flowers, is good for young and old alike, honey producers and members of the honey industry in general, can have cause for double satisfaction. Surely,

3 months—14 pounds.

8 months—19½ lbs.

Hall Albro Kellogg has eaten honey almost from the day of his birth.

12 months—23½ pounds

we should not suppress the truth; surely we should proclaim the truth as good news. Every keeper of bees should make sure that his local doctor knows that honey is not sucrose but substantially the same combination of dextrose and levulose found in the sugar of ripe fruit.

Copies of "Honey as a Food and Medicine" should be distributed locally. The local druggist should be told about it. He should know that any ice cream is finer if honey is poured over it, and he should also know that such a combination is good for anyone.

The honey industry cannot hope to export honey to foreign countries for the time being. This is unpleasant but that very situation may become a blessing in disguise. Every producer of honey, whether of 10 pounds or 10 carloads, can help. A very good way to help the situation nationally, is to take care of the situation locally. Pointing out the value of honey for babies and children is not difficult, for such information, if reasonably presented, is eagerly received. Beekeepers, do your part!

Here is just one illustration of a child literally brought up on honey. That is, aside from the natural sugar, lactose, in the milk, no other sugar than honey was used.

Hall Albro Kellogg, whose "biography" (as far as it goes) is here given, has developed normally from the very day of his birth. His bones are sturdy and his muscles well developed.

At seven weeks he held his head up with no help. At three months he sat in a chair. At six months he sat up straight on the floor with no support back of him.

At seven months he pulled himself to his feet and stood by his play pen. At seven-and-a-half months he began to creep. At eight months he began walking by hanging on to pen or chair. At eleven months he took his first steps alone and when one year old he was running around independently, outdoors and in.

He has never had a digestive upset and only one slight cold from which he recovered in two days.

The doctor who has attended him makes the following statement:

Little Hall Kellogg has been under my care since 1/15/40. During all this time honey has been used as the carbohydrate in his formula. As far as I can observe, he is developing quite normally—perhaps better than the average. Certainly honey has agreed completely with him and seems to have been a satisfactory type of carbohydrate.

Clewell Howell, M. D.

Dr. John R. Phillips, of Allentown, Pa., started this baby on the honey formula.

Age	Weight	Height	Formula
Birth	7 lbs. 8 oz.	20½"	Breast fed for two weeks.
1 Month	9 lbs. 7 oz.	21¾"	15 oz. Grade A Milk. 10 oz. Water. 3 tablespoons Honey.

(Continued on page 123)

XUM

National Advertising of Honey

By T. W. Burleson

[Talk given at the Tampa, Florida meeting, Nov. 18-20, 1940.]

T. W. Burleson

For several days after I was asked to come here to Tampa, this lovely Winter Garden of America, and speak to you, I puzzled over the problem of selecting a subject that I felt would be of real importance to everyone of you.

A few weeks ago as I sat in a hotel room in Omaha at a meeting of the Directors of the American Honey Institute, it suddenly came to me that the problem that we were discussing at that time was one in which every package bee and queen producer as well as every honey packer and honey producer should be vitally interested and should face and help solve if our great industry is to grow and prosper. I immediately chose a discussion of that problem as the subject on which to talk to you today.

Now, what is this problem of such great scope and importance that it affects every member of the honey industry? I believe that it can be stated best by reading you a few paragraphs from a talk on the same problem that I made at the meeting of the Institute in Sacramento last winter.

At that time I stated: "The most vital problem of the honey industry today is to create a more widespread demand for honey through publicity and advertising that will reach those millions of families who do NOT eat honey regularly. Remember, most of them do not eat honey because we have failed to let them know what we know about honey. Much good work along this line can be done by packers and producers and beekeepers individually but it is my belief that the problem is so great in scope that it can best be done cooperatively through our various organizations. In consumer demand lies the key to the price situation that we, in the honey industry, have encountered all too frequently in recent years. In consumer demand lies the key to prosperity for beekeeper, producer, and packer alike. Even a moderate increase in the use of honey would result in raising and firming the price structure of honey and in creating a better market for bees and beekeepers' supplies. And this we ALL—producer, handler, and packer alike—desire."

In concluding that talk I said: "The time has come for us in the honey industry to look our selling problem squarely in the face, to observe the fundamentals of successful selling in every branch in the industry, and to use for our industry those tools of modern merchandising and selling that are available."

Now, why do I say that this problem of creating greater consumption for honey is yours? Why do I say that the time has come for you to help your industry employ the tools of modern selling and merchandising? Gentlemen, the prosperity of every beekeeper in America in the final analysis, is completely dependent upon the prosperity of the honey industry, as a whole. All too long the various units in the industry—the packers, the producers, the wholesalers, and the bee men—have viewed their problems as being distinctively their own. All too often producers have felt that once they have disposed of their crop to handler or packer that their job was done. All too often you have felt that when your package bees and queens found their place in the colonies of America's producers, your job was done. Perhaps twenty years ago that would have been true—but it is not today. In the face of present day competition, any industry, in order to hold its market, in order to keep its surpluses at a minimum, in order to maintain its prices at profitable levels, must successfully and strongly sell and merchandise its final product to the American public. In our

case, that final product is honey! The evidence of our failure to do this necessary selling and merchandising is looking us squarely in the face.

For years we have faced contracting markets. Exports of honey a few years ago were more than 10,000,000 pounds a year—this year they will probably be less than 1,000,000 pounds. During recent years domestic consumption has fallen off greatly due to lack of selling effort on our part and because of competition of other sweets and food stuffs which have been using that most important of all the tools—ADVERTISING! It is also true that production of honey has fallen off during this period—and that is a point of greatest importance to every one of you here today. And why has this happened? Simply because many honey producers have found that they cannot make a profit at present prices. We all remember just a few years ago when clover and alfalfa honey held firmly at prices of 9c or better. We all know what the price is today—it probably won't average over 4½c. Just think of the millions of dollars of loss that reduction represents to you and to me and to thousands of members of the honey industry in every section of the country.

Unless we all—beekeeper, honey producer, and honey packer alike—make up our minds quickly to put our shoulders to the wheel and do our part to help turn the tide the other way, ultimately our business may become so unprofitable that we will have to find other fields of enterprise. Problems similar to ours have faced many industries in recent years and many of them have found the solution and turned the tide upward through cooperative advertising. Always such cooperative advertising has had to be initiated and the brunt of the first and hardest efforts borne by the leaders of that industry. I am glad to be able to tell you that that first hard step has already been taken! Within a few days in New York City a committee of producers and packers with $20,000.00 in their hands, will undertake to institute the first national publicity plan ever promoted by the Honey Industry, and that publicity plan is just the first step! If any of you are familiar with National advertising, you will quickly realize that only the first steps in a real campaign can be taken with any such sum. At least 10 times that amount will be necessary to carry forward an advertising campaign for honey of such proportions that it will do a real selling job for us all. The entire $20,000.00 now available was raised through the efforts of less than 20 packers and producers of the industry. Only when the time comes that the whole-hearted support and generous financial backing of everyone of you folks here today, as well as that of all producers and packers throughout the country, is secured, will our industry be able to institute a real man-sized campaign and begin to turn the tide through increasing consumption of honey.

Now let me deal briefly with some objectives toward which we will drive if we undertake such a campaign. Some time ago our advertising agency conducted a survey in a section of the country that Department of Agriculture figures show to be one of America's heaviest per capita honey consuming areas—to determine just how many families actually used honey. The result of that survey showed that while approximately 21% of the families interviewed used honey with some degree of regularity and usually kept it in the home, less than 10% used it with sufficient regularity in cooking and on the table to insure the consumption of a good volume. It showed that 11% of that 21% used perhaps 3 to 6 pounds a year and that primarily for table use, while only 10% used it for such things as baking beans, making pies and cakes, and for cooking in other ways that greatly boost the consumption of honey. I personally know of one case of a family that, while they have used honey for many years on the table for hot cakes and waffles at the rate of perhaps 6 or 8 pounds per year, learned of the value and goodness of honey cooking and for other uses. What was the result? That family today uses from 1 to 3 pounds of honey every week. Think of it! Just a few families swung from that 11% occasional user group into that 10% regular user group would increase the consumption of honey by millions of pounds. To influence such a swing would be one of the objectives of our campaign.

The same survey indicated that 42% of the families did not use honey at all, while 37% used it very seldom or only occasionally and did not keep it in the house regularly.

XUM

Thus, a total of 79% of the families interviewed knew practically nothing about honey. Of that 79% less than 6% had a definite objection to honey such as its taste, allergic, or other qualities. The largest part of that 79% market is waiting for us to develop it. They have been sold on the health qualities of oranges—they have been told about walnuts—they have been sold tomato juice—they have been sold all manner of things and have spent more and more of our share of their food dollars on such items. In the field of sweets they have been sold jams, jellies, candies, cane sugar, corn syrups, and dozens of other items that have each gained for themselves a portion of our natural market and taken an ever increasing part of our share of their food dollars. Right now the magazines are full of advertisements lauding dextrose as an energy food. We should be warned that dextrose alone is not a cure-all. Honey contains dextrose, but it also contains vitamins and minerals. These are the essential food elements. Dr. Abbott has warned us that most deficiency diseases are caused from eating demineralized and denatured foods that do not supply these essentials in which honey abounds.

To sell them honey and to capture for honey its rightful share of that great market would be another objective of our campaign. I am firmly convinced that a cooperative national advertising campaign—designed to drive steadily toward these objectives—will pay every one of us many times over and bring the answer to many of the problems with which we have struggled during recent years. I, as a member of the honey industry, and as a beekeeper, honey producer, and a packer, ask everyone of you to make this problem yours and to make its solution one of your objectives so that when the time comes for you to do so you will open your purses and do your share toward carrying on the work that is now being started by an advertising committee of the American Honey Institute for the benefit of us all.

Gentlemen, we producers of queens and package bees are just a link in the chain and we as well as the honey producers, bee supply manufacturers, and can and glass container manufacturers, should contribute our share of this fund. With the cooperation of all we can and should have one-fourth million dollars annually to turn over to the American Honey Institute for advertising. And with this fund, it is my belief that within two years after such campaign is started the honey producers will receive from 1c to 2c per pound more for their honey than today, and you will get a fair price for your bees and queens.

THE HONEY PUBLICITY PROGRAM

By Harriett M. Grace

Since a number of letters have come to the American Honey Institute to inquire how the Publicity Fund is to be spent perhaps the following statement will clarify it.

The entire fund to be raised for publicity, as well as the budget of the American Honey Institute, will be administered entirely by the Institute. A sufficient amount will be allowed for carrying on the work of the Institute, which will enable it to enlarge its program with allied food organizations, with schools and colleges and find new uses for honey. The balance will be appropriated for publicity in newspapers, magazines and over the radio.

All publicity activities will be directed towards Honey, no brand of which will be mentioned. Every honey producer, regardless of his location, will benefit by this arrangement.

A committee, composed of Lewis W. Parks, Chairman, T. W. Burleson, John H. Paton and Walter F. Straub, have worked unselfishly to see that the entire industry derives the greatest possible benefit and have supervised and aided in the publicity efforts, with which they are entirely familiar.

The Institute has employed the nationally famous organization of Steve Hannagan and Associates, and Harriett M. Grace, after conferring with Mr. Hannagan and members of his organization to discuss the program, believes she can assure the beekeepers of America that these men will work unreservedly to promote the best interest of the honey industry and to achieve the objective; namely, greater consumption of honey.

The Kellogg cereals.

The Beekeeper's Friend

By Mrs. Benj. Nielsen

Famous Concern Promotes Use of Honey in Connection with Cereal Products

For many years beekeepers have had a most able and very loyal ally in the Kellogg Company of Battle Creek, Michigan. This concern has an enviable reputation as the maker of the fine cereals pictured here. These healthful cereals, unsurpassed in consistent crisp goodness, fine flavor and attractive packaging, go into homes throughout the country. Kellogg's always suggest the use of honey on cereals rather than sugar. At our house, the children think there is no better way to start the day off right than with a big dish of Kellogg's Corn Flakes, Rice Krispies, or Pep, sometimes heaped with fruit, always liberally drizzled with honey and floating in a lake of cream or rich milk. There's an unceasing temptation in their crisp goodness and time has never dimmed the "magic" of the delightful pops and crackles when Kellogg's Rice Krispies meet milk or cream!

Many of my readers, no doubt, are familiar with the famous Battle Creek Sanitarium. Mr. W. K. Kellogg, of the Kellogg Company, was connected with the sanitarium at one time, but for the past 35 years has been at the head of the cereal business. Mr. W. K. Kellogg is a strong believer in honey as a sweet and is a constant user of honey. It was through his friendship with Mr. A. I. Root that a cooperative plan was developed which has resulted in the mention of honey many millions of times a year by the Kellogg Company.

This splendid aid does not end with the mere mention of honey. These famous cereals do not make their appearance solely at the breakfast table. No indeed! A very competent staff continually works out the grandest variety of appetite-teasing recipes. All of which is a real break for beekeepers and honey conscious folks. I have on my desk numerous gummed recipe labels, inserts, cards and four excellent honey recipe leaflets sent to me by Miss Mary I. Barber, director of the Home Economics Department. These recipes have been thoroughly tried out in the Home Economics Department and many delightful treats are in store for those who try them in their own homes. The leaflets entitled "Honey", "Honey Recipes", "Honey Hints", and the latest contribution, "Honey 'Round the World", contain interesting information regarding honey, and many suggestions for using honey in addition to the tested recipes. Moreover, copies can be supplied in quantities if you wish them for distribution. Simply address your request to: Home Economics Department, Kellogg Company, Battle Creek, Michigan, stating the number of leaflets you wish and the way or ways you plan to distribute them. They will come to you postage paid.

Each week recipe releases are sent to food's editors throughout the country for use in their various publications. These are prepared by Barbara B. Brooks, who certainly knows how to work up a good appetite for you with her delightful chatter before she gives you her fine recipes. These sheets frequently contain splendid honey recipes. And so the good work goes on!

Such a splendid spirit of steady helpfulness merits the deepest appreciation on the part of all beekeepers and deserves the heartiest cooperation—an active cooperation. You may drizzle honey on Kellogg's cereal for the first time out of gratitude, or curiosity—you'll remain a steady consumer because of its downright tasty goodness! Mr. Root and Mr. Kellogg knew what they were doing when they agreed to make team mates of these two wholesome foods—honey and cereals. Keep the honey jar filled and a good supply

XUM

of these cereals on hand—you'll want to use these recipes again and again.

Before passing along some of their honey recipes, here's an interesting bit from the leaflet "Honey 'Round the World":

Animals were probably the first creatures to realize what a delicious store the bees had hoarded in some hollow tree. Many times the bees must have had their hives raided by some huge blundering bear or perhaps even a strange prehistoric animal which we cannot imagine. Early honey may have been made from the nectar of flowers that no longer bloom—from the lovely blossoms that long since have become extinct.

It is interesting to picture how man must have first become aware of honey and its goodness. Perhaps some early caveman awoke one windy morning to find a bee tree had been blown over during the night and honey was oozing from it. He investigated the golden liquid and found it good. After that he sought out the bee trees and stored some of the honey for winter use.

Recipes using honey are found in the oldest recipe books. "Apicius", a book on cookery and dining in Imperial Rome, written in the tenth century, yields a wealth of references to honey. It is used in fine spiced wine, rose wine, violet wine, and is recommended as a refresher for the traveller, giving strength and endurance to pedestrians. To preserve honey cakes, "mix Greek yeast with flour and honey when making". To make spoiled honey good, "mix one part spoiled with two parts good."

In ancient Scandinavia a magnificent festival in honor of the god Thor commenced the winter solstice. At this sumptuous celebration the peace offerings dedicated to Thor were cakes of fine flour, sweetened with honey.

More modern recipes from other countries show interesting uses for honey. English people use it in Oatmeal Tea and Linseed Tea—both suggested for breakfast. Honey cookies called "Mazovesky Prianinki" appear in a Russian book. A volume on Chinese cookery yields a recipe for "Water Angels Cooked in Honey". Water Angels evidently are a fish similar to scallops. Mexican cooks enjoy hot Tortillas (unleavened bread made from corn meal) with honey. How many of US enjoy Johnny Cake or corn bread, served hot, with honey!

Help yourself to health and start the day off right with:

Honey Tomato Juice Cocktail

Two cups tomato juice, 4 tablespoons lemon juice, 2 teaspoons honey, and ¼ teaspoon salt.

Mix ingredients thoroughly. Chill. Yield: 4 servings.

Another time try:

Honeyed Prunes

One-half pound prunes, 1½ cups boiling water, ¼ cup honey, and 2 slices of lemon.

Wash prunes and drain. Cover with boiling water and let stand until cool. Add honey and lemon slices; place in covered container. Store in refrigerator and use as desired.

All-Bran honey griddle cakes.

Next a big bowl of honey sweetened cereal, then follow up with either of the following crisp tender treats:

All-Bran Honey Griddle Cakes

Two eggs, ¼ cup honey, 2¼ cups milk, 3 cups flour, 4 teaspoons baking powder, 1½ teaspoons salt, ⅓ cup shortening, and ½ cup Kellogg's All-Bran.

Beat eggs until light and fluffy, add honey gradually and continue beating. Add milk and mix well. Sift flour with baking powder and salt, add to first mixture, stirring until flour disappears. Add cooled, melted shortening. Fold in All-Bran. Bake on hot griddle turning only once. Serve with honey-butter made by combining ¼ cup honey with ½ cup butter and beating until creamy. Yield: 15 cakes (5½ inches in diameter).

Honey All-Bran Waffles

One and ½ cups flour, 4 teaspoons baking powder, 1 teaspoon salt, 2 eggs (separated) 1 cup sweet milk, 2 tablespoons honey, ½ cup melted shortening, and ¾ cup Kellogg's All-Bran.

Sift dry ingredients. Beat egg yolks and combine with the milk and honey. Add to the dry ingredients and mix well. Add melted shortening and Kellogg's All-Bran. Fold in stiffly beaten egg whites last and bake in a hot waffle iron. Serve with honey-butter.

Good for breakfast, dinner or supper are:

Honey, Nut All-Bran Muffins

Two cups flour, 2 teaspoons baking powder, ¼ teaspoon soda, ½ teaspoon salt, 2 cups Kellogg's All-Bran, ¾ cup chopped walnuts, ½ cup honey, 1 tablespoon melted butter, and 1½ cups milk.

Sift flour, baking powder, soda, and salt together, add Kellogg's All-Bran and walnuts. Mix honey, melted butter, and milk. Add to dry ingredients. Bake in hot oven 25 minutes. Yield: 16 muffins.

Economical and a decided change from the customary sundae is the crunchy topped

Honey Krisp Sundae

One scoop of vanilla ice cream, 1 tablespoon extracted honey and 2 tablespoons Kellogg's Rice Krispies.

Drizzle the honey over the ice cream, sprinkle with Krispies and top with a bright maraschino cherry if desired.

Chocolate ice cream, honey, and Rice Krispies make still another popular cereal sundae.

If you have never tried using Kellogg's All-Bran in your breads there is a real cooking thrill awaiting you. Either of the following two breads have superb flavor, keep fresh exceptionally well and are extra good for sandwiches. Simply cut thinly and spread with softened butter. Creamed cheese makes a welcome filling too, which combines well with both breads. And so easy to make these breads—no kneading at all!

Honey All-Bran Banana Bread

One-fourth cup butter, ¾ cup honey, 1 egg, ¾ cup Kellogg's All-Bran, 1½ cups flour, 2 teaspoons baking powder, ½ teaspoon salt, ½ teaspoon soda, ½ cup chopped nuts, and 1 cup mashed bananas.

Cream the butter and beat in the honey and egg. Add the All-Bran. Sift the dry ingredients and mix in the nuts. Add dry ingredients to the creamed mixture alternately with the bananas. Bake in a moderate oven, 350 degrees F., about 1 hour. Yield: 1 loaf (8½x4½).

Honey Pineapple All-Bran Bread

Two tablespoons fat, 1 cup honey, 1 egg, 2¼ cups flour, 1 tablespoon baking powder, ¾ teaspoon salt, 1 cup Kellogg's All-Bran, 1 cup unsweetened pineapple juice, and ¾ cup chopped nut meats.

Cream fat and honey; add egg and beat with rotary beater until creamy. Sift flour with baking powder and salt. Stir about one-half of dry ingredients into first mixture, add All-Bran and pineapple juice, and mix well. Add remainder of dry ingredients with nut meats and stir only until flour disappears. Bake in greased loaf pan, lined in the bottom with waxed paper, in moderate oven, 350 degrees F., about 1 hour and 15 minutes. Yield: 1 loaf (4½x8½ inch pan).

When you are tired of sweet potatoes prepared in all the old standby ways try:

Honeyed Sweet Potato Slices

Six medium sized sweet potatoes, ½ cup honey, 1 cup Kellogg's Corn Flake crumbs, 1 teaspoon salt and 2 tablespoons butter.

Scrub potatoes thoroughly and cook in boiling water until tender. Peel and slice ½ inch thick. Heat honey in a small sauce pan. Combine Corn Flake crumbs and salt. Dip slices of potatoes in warm honey and roll in Corn Flake crumbs. Place in a buttered baking pan and dot with pieces of butter. Bake in moderately hot oven, 425 degrees F., about 25 minutes. Yield: 6 servings.

Honey nut All-Bran muffins.

XUM

Here are two grand treats to have on hand when unexpected guests drop in.

Honey Date Pudding

One-half cup flour, 1 teaspoon baking powder, ½ cup Kellogg's All-Bran, 2 cups dates, chopped fine, 2 eggs, beaten light, ¾ cup honey and ½ cup broken nut meats.

Sift dry ingredients and mix well with remaining ingredients. Bake 20 minutes in a moderate oven, 375 degrees F. Serve with cream, whipped or plain, or roll in powdered sugar.

Honey Date Bars

Two eggs, ¾ cup honey, ½ cup Kellogg's All-Bran, ½ cup flour, 1 teaspoon baking powder, ¼ teaspoon salt, 2 cups chopped dates, and ½ cup chopped nut meats.

Beat eggs well; add honey and All-Bran. Sift flour with baking powder and salt; add dates and nut meats. Add to first mixture, beating well. Spread batter ½-inch thick in greased shallow pan, and bake in moderate oven, 375 degrees F., about 30 minutes. Cut into bars while warm and dust with powdered sugar.

Next time club meets at your house plan to serve this delectable Honey Krisp Roll.

Honey Crisp Roll

One cup Kellogg's Rice Krispies (rolled and measured after rolling) ½ cup chopped dates, ¼ cup chopped nut meats, 8 marshmallows (cut in pieces) ¼ cup honey, ½ pint whipping cream, and ½ cup rolled Kellogg's Rice Krispies for outside of roll.

Mix all ingredients except whipping cream and ½ cup rolled Rice Krispies. Whip cream until stiff. Fold mixture into whipped cream. Shape into a roll and cover with Rice Krispie crumbs. Line a pan with waxed paper, sprinkle with Rice Krispie crumbs and place roll in pan. Chill from 4 to 6 hours. May be kept for several days. When ready to serve slice with a sharp knife, top with whipped cream sweetened with honey and garnish with a fresh or preserved strawberry or cherry. Yield: 10 to 12 servings.

Sour Cream Honey Pie

Three egg yolks, ⅓ cup honey, 2 tablespoons flour, 1 teaspoon cinamon, and 1 cup sour cream. And for meringue: 3 egg whites and 3 tablespoons honey.

Beat egg yolks in top of double boiler. Add honey which has been blended with flour and cinnamon. Add sour cream. Cook in double boiler until thick. Cool. Line an 8-inch pie pan with Corn Flake pastry. Fill with cream mixture. Beat egg whites until stiff. Add honey and continue beating, until well blended. Spread on top of pie. Bake in slow oven, 300 degrees F., about 20 minutes. Yield: 1 8-inch pie.

Honey Apple Cream Pie

Two teaspoons gelatine, 2 tablespoons cold water, 3 cups hot unsweetened apple sauce, 1¼ cups honey, dash of salt, ¼ teaspoon nutmeg, ½ pint whipping cream, and 2 tablespoons honey.

Soften gelatine in cold water and add to hot unsweetened apple sauce. Add 1¼ cups honey, salt, and nutmeg. Cool. Line 9-inch pie pan with Corn Flake pastry. Pour in apple mixture and allow to set in refrigerator. Just before serving, cover with whipped cream which has been sweetened with the 2 tablespoons of honey. Yield: 1 9-inch pie.

Honey All-Bran waffles.

Honey Corn Flake Shell

One and ¼ cups fine Kellogg's Corn Flakes crumbs, ¼ cup butter, melted, and 1 tablespoon honey.

Melt butter in pie pan. Add honey and Corn Flake crumbs and mix thoroughly. Mold to form shell.

Insulation vs. Little or No Insulation of Hives during Winter

By E. R. Root

The Question of Locality and the Effect of Moisture on the Problem Reviewed

During the last few years there has developed quite a diversity of opinions on this question of wintering, particularly whether insulation of hives is or is not a mistake. So much material came in that our editorial staff finally decided on a symposium on wintering, in which we would attempt to give divergent views, and then harmonize them, if possible. This was given in our October issue, pages 638 to 651.

Perhaps no set of articles has stirred up more interest than this symposium, particularly since it leaned toward less of packing for the hives, and more toward the necessity of caring for the internal condition of the colony itself. Some of the opinions are in harmony with the new teachings and some of them for the old are sharply critical.

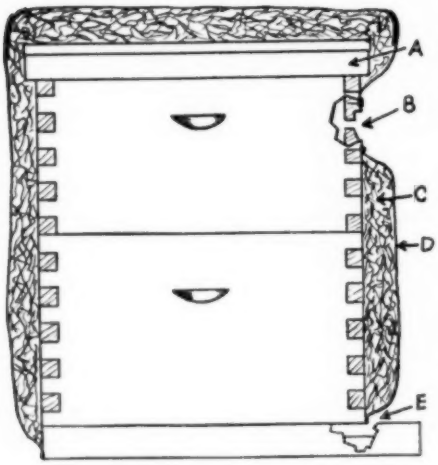
If one will go over the symposium again, beginning in our October issue, he will find that not all views expressed are in harmony. To bring out discussion, we printed the most radical views first, and then followed with those which are more in harmony with the advocates of heavy hive insulation. In a word, we tried to give fairly both sides in the one issue.

In the first article, page 638 of the symposium, R. O. B. Manley expresses himself as decidedly against the double-walled hive, with its packing, and thereby gave such hive a decidedly black eye. Publication of this article may have given some the impression that the editors of Gleanings were against insulation in all forms. In referring to the Manley article, we said, page 650, "The testimony of hundreds of beekeepers as well as scientists show hive insulation may save from five to twenty pounds of stores per hive, over hives not insulated for some localities where the atmosphere is relatively dry and cold. In the region of Great Britain, the Great Lakes and coastal plains of the United States, there is a large amount of moisture not to say frequent fogs during the cold period of the winter. For these areas double walls and packing may perhaps be worse than useless. The colony is surrounded in wet packing that sometimes freezes". Again, on the same page we said, "While admittedly packing is a means of saving stores, the cost of applying it may more than offset its value in some localities." On the next page, 651, we quote again, "We do not advise dropping packing or insulation of the hive until you find you can get just as good results without them. In many cases you may find a single wrapping of slater's felt around a colony in a two-story hive in a protected locality will enable you to get a crop of honey at less cost than if you go to the expense of packing". On page 681 of the November issue we say, "The heavy winter loss in Ohio, as Reese points out on page 803, this issue, was due more to a shortage of pollen and honey in late fall than to winter's cold. The combination of extreme cold and pollen and honey shortage made Ohio's winter loss large."

On page 596 of the September issue we quote again, "While Mr. Hambleton and his workers do not under-rate the value of moderate packing, they do feel that too much emphasis has been placed on hive insulation and not enough on conditions within the hive."

Now, let us turn to our book, the A B C and X Y Z of Bee Culture, 1940 edition. Under head of "Wintering", page 769, we say this, "Some of the fundamental requirements, as we now regard them, are, first of all, a strong colony of comparatively young bees in a two-story hive as explained under Food Chamber, page 300. This means another important requisite, a young queen, introduced in early August, for most of the Northern States. Brood-rearing will follow, when a large number of young bees supporting the older ones, will go into winter quarters. Next follow in importance natural food, honey, and pollen, a dry winter nest, plenty of windbreak and finally **moderate packing or enough**

to take care of zero temperatures when these occur". In the following pages of the book we show double-walled hives, how to pack colonies, giving illustrations showing each successive step. We show a diagram illustrating how a colony can be packed and yet provide for the escape of moisture by means of an upper entrance.



Method of packing in slater's felt so that both entrances, top and bottom, will be open. No tubes or tunnels are necessary to penetrate the packing. The slater's felt is tacked down around the openings at B and E. Packing material should be dry leaves, not planer shavings.

A final quotation from the A B C and X Y Z of Bee Culture, 1940 edition, page 771, reads, "The author advises packing rather than erring by not giving sufficient protection. In localities where the temperature goes to 10° above or 10° below zero F., and especially if it goes to 40° below, packing of three to four inches around the sides, six inches on top, is here advised; but it should be made clear that this packing should be kept dry."

By turning back again to the symposium, it will be noted that moisture is the great foe of wintering. In former times very little attention was paid to the danger of wet packing.

While we have favored packing, as shown by the quotations, we have insisted all along that it must be **kept dry**; that the upper entrance (small size) provides a means for the escape of moisture; that if this moisture does not escape, and goes into the packing and freezes, it is worse than useless.

We have explained how, in dry climates, such as that found in Colorado and the great Northwest, in the Rocky Mountain region, beekeepers seldom or never use packing of any sort. The climate is so dry that moisture does not get into the hive, and when it does, it seems to do little or no harm. When we mentioned the fact that house builders and architects do not recommend dense packing between the walls of a building, one might draw the conclusion that we were against the use of packing on hives. The architects all agree that moisture must be kept out of packing, or it will do more harm than good. The same general principle will apply to a bee hive.

Locality is a very important factor, particularly when we consider the location of the apiary and the general state or territory where the bees are kept. Because we mentioned that packing is not used in dry climates, no matter how cold, some of our readers may have the idea that we are against packing for all localities. If the reader will follow carefully what we have written, he will see that we are in favor of moderate packing, but that packing **must be kept dry.** Sawdust or planer shavings gather moisture and become wet, something like a sponge. Loose straw, or leaves, if perfectly dry, would be useful and helpful in many localities.

In our "Talks to Beekeepers" appearing each month we have never minimized the value of protection for bees.

The editors of Gleanings have open minds. We have no apologies to make for what we have published, but earnestly hope our readers will read very carefully what we have said, rather than jump to the conclusion that we are opposed to all hive insulation, everywhere.

Winter Brood-rearing

The question of winter brood-rearing is, perhaps, a debatable question. We have seen such excellent results from it in our own yards that we are inclined to favor it, but one should not get the idea that the amount of brood in January will be very large. It will be found **inside the cluster** in a space about two inches square, but just enough to take care of the loss by old bees dying off. In February it may occupy a space of

(Continued on page 126)

The double packing case provides three inches cut straw for insulation. Colonies in this case are provided with lower entrance (covered by snow) and a ⅝-inch hole through wall of upper super. A piece of pipe provides the tunnel through packing and case.

Wintering Bees in Canada

By C. B. Gooderham
Dominion of Canada Apiarist

Paper read at Ontario Beekeepers' Convention in Toronto, Nov. 1940.

The wintering of bees is an important phase of Canadian beekeeping because the continuity of the industry, on the scale it has now reached, depends very largely upon the success with which we are able to cope with this problem. A number of beekeepers, however, question the advisability of attempting to winter at all preferring to destroy their bees in the fall, replacing them with package bees the following spring. While there is much in favor of this policy there seems to be an increasing tendency to question the economy of it.

There are approximately 414,000 colonies of bees in Canada and the number is increasing each year. If all of these were destroyed there might be considerable difficulty in replacing them with packages when needed. Assuming, however, that they could be replaced it is quite safe to say that a large number of them would be useless as producers of honey because of the supersedure of queens which we know to be quite high in package bees. Furthermore, it is only within certain areas of Canada that package bees can ever compare favorably with overwintered colonies and even within those areas (Braun 1) has shown that over a long term of years overwintered colonies are more profitable than packages. Then, again, there is the question of cost. At the moment there is an adverse rate of exchange of eleven per cent on Canadian funds and in addition a special import duty of ten per cent which no doubt will materially increase the price of package bees delivered in Canada.

The average value of package bees brought into Canada during the five-year period, 1935-1939, amounted to $183,059 but for 1940 it jumped to $218,350, an increase of $35,291 probably due to exchange and duty. Had this money been spent on the wintering of bees we already had last fall it is just possible that we would have received a greater return for it than from the packages bought.

If the same thought and care were given to the preparation of bees for winter as is given to the care of other live stock there should be little or no difficulty in wintering bees successfully. We all know the three main essentials for safe wintering, but for some reason or another few of us provide them in their entirety.

The first essential is populous colonies. I think it is agreed that in order to have one's colonies up to full-producing strength in time for the main honey flow it is also necessary that those colonies be of reasonable strength when put away for the previous winter. This is especially true in regions where the main honey flow comes early and the building-up period of spring is comparatively short. In spite of this knowledge, however, many colonies are put away for winter so weak that even if they are able to survive the winter there is little or no hope of their ever building up to maximum producing strength the following spring. It may be argued, and quite truly, that weak colonies may be wintered quite successfully, but

there is a difference in dollars and cents between bringing out a boarder instead of a producer in the spring.

In addition to being strong in bees it is also agreed that the bees going into winter quarters should be comparatively young, yet how many take the precaution to see that all colonies are headed with prolific queens during the fall months or that the queens have sufficient room for maximum egg production and that the bees have enough food to fill the needs of the colony. There is a strong tendency to take chances on old and over-worked queens that may weaken and fail at a time when they should be at the peak of their production. There is also a tendency to strip the colonies too closely when removing the main honey crop and placing too much reliance on a fall flow which may not materialize, resulting in curtailed brood production and weak colonies of old bees for winter.

The second essential is food, yet I believe more colonies die or become seriously weakened from the lack of it, or because of its poor quality, than from any other cause. Just because the bees once wintered safely on a minimum of food it does not follow they will do so every year, and it is a good deal safer to have too much than too little. The bees should be prepared each fall as though the coming winter is going to equal the worst on record. This is especially true if the bees are to be wintered outside.

When feeding in the fall it should always be remembered that the heaviest consumption takes place during late winter and early spring long before weather conditions permit opening the hives for extra feeding and also long before new sources of supply are yielding.

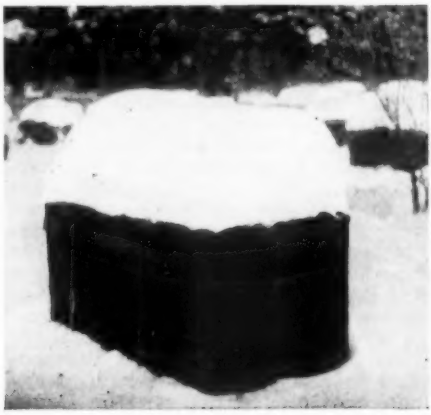
In addition to being adequate in quantity the food supply for winter must also be wholesome. Experience has shown that honey from sources other than the clovers or buckwheat is likely to lead to disaster, especially those gathered during spring and fall. Certain honeys granulate much faster than others, and if the winter's supply consists mainly of such honeys the bees may die of starvation, surrounded by food which they cannot use. Other honeys rapidly produce dysentery and death yet many beekeepers appear to be willing to take a chance rather than replace doubtful food for one that is known to be safe.

Pollen is necessary for brood production and as brood-rearing starts in the spring long before new supplies are available the colonies must have an adequate supply of it when packed away for winter. In most places in Canada the bees are able to secure enough in the fall for their spring needs.

The third essential for safe wintering is protection and is one we appear to know least about. This is

There are four colonies in this group. The two lower ones have bottom entrances which cannot be seen for snow. The upper colonies have top entrances. This group are in the tar-paper wrap with three inches cut straw as insulation.

Two colonies wrapped in paper. First wrap is Eddy's Sulphite paper, second layer is Weather-tuf. Bees supplied with top entrances only in this particular group. There are two other groups with the same pack. (1) Bottom entrances only (2) with both lower and upper entrances.



plainly indicated by the wide variation of opinion concerning it.

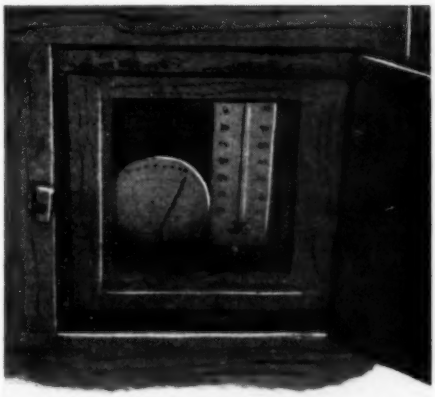
Over the greater part of Canada the winter is usually long and severe, with occasional wide fluctuations in temperatures within the space of a few hours. I am doubtful if there is any area in the Dominion where bees can be wintered successfully outside without protection other than windbreaks.

Taking everything into consideration there is little doubt that cellar wintering is the safest but unfortunately many of the cellars used for the wintering of bees are unfit for that purpose. A good cellar is one that can be kept dark, fairly dry, well ventilated, free from vibration and at a uniform temperature of less than 50° F. throughout the entire winter. All winters are alike to bees wintered in a good cellar. Sometimes, especially in long range beekeeping, a suitable cellar is not available and outdoor wintering is the only alternative.

For outdoor wintering the type of case used is, I think, of little consequence, provided certain points of construction are observed. In the first place, the cases must be large enough to hold the required number of colonies plus sufficient insulating material on all sides of the colonies and be so made that they will keep the insulating material dry from external moisture, and, secondly, they must allow for the escape of all internal moisture as well as provide for bee flight whenever the weather permits it.

During the past few years the tendency has been towards small packing cases or permanently packed hives while the larger multiple cases are being discarded. One of the main objections raised against the large case is that it does not permit the bees to warm up fast enough in the spring. For our Canadian climate, however, I do not think the objection is valid because we know that if the internal temperature of any case is easily and quickly raised by the sun's rays large numbers of bees will take flight when the outside air temperature is too low and thousands of them will fall to the snow and perish. I do not think the trouble lies in the size of the case but rather in the way it has been used and this applies to all cases and the bee cellar as well.

We have stressed the importance of keeping the insulating material



This is not a good photograph but it shows what is intended. It shows a minimum and maximum thermometer and a hair-hygrometer suspended in the back of a colony in a single packing case. If you look closely you will see that when the picture was taken, on December 4, the temperature stood at 40° F. while the minimum had gone to 32° F. The humidity stands at a slack 81%.

dry, but have given consideration to external moisture only, ignoring to a large extent the effects of internal moisture. We know that wet packing is useless as an insulator, yet we have been allowing the moisture from the hives to escape into the packing with the result that the latter has become wet and at low temperatures frozen. It is not sufficient for the moisture to escape from the hive alone, it must also be carried to the outside of the case. Ventilation in a bee cellar is largely to carry the moisture out of the cellar. Why not the same for wintering cases?

Moist air is lighter than dry air at the same temperature, therefore, it will gather at the top of the hive. To let it escape into the top or side packing is soon going to convert the packing case into an ice box, for when this air meets the cool air from outside, the moisture it contains will condense and become water which in turn becomes ice at 32° F. It looks to me as if the top entrance or a combination of both top and lower entrances is the solution. With lower entrances alone the moisture-laden air at the top of the hive is likely to condense and fall to the bottom of the hive, and then run out as water. Alfonsus (2) has shown that a food with high moisture content is responsible for dysentery, while Martin (3)

(Continued on page 127)

XUM

From the Field of Experience

A BEGINNER'S OBSERVATIONS ON CAUCASIANS

By C. O. A. Kramer

Ever since starting with bees, about three years ago last spring, I wanted a colony of Caucasians. Perhaps the illustration I saw in the A B C and X Y Z of Bee Culture, showing the Rev. Hepner handling them without veil or smoker during a rainstorm, had something to do with this desire on my part.

From all accounts they were gentle—they were prolific—they built up early in the spring—they capped their combs a beautiful white, etc. So, last spring early, I made a few inquiries of Southern breeders and sent to one of them for a three-pound package.

As we all know, shippers were late sending out packages. Mine arrived about the middle of May. I had no trouble putting them into their future home and started them off with nice, new foundation and about five pounds of warm syrup placed over the opening of a honey-board, well tucked in with burlap sacking. There was not much flying for two or three days, but the fourth day, the thermometer being about 72, they came out with a rush early in the morning and started bringing in pollen by the load.

About a week later I removed the empty queen cage and found that they had consumed only about half the syrup and were no longer working on it. I also examined the frames and found about four or five of them well drawn out, but not a sign of eggs or larva. I wrote the party from whom I purchased the package, enclosing the price of another queen, naturally assuming that something had happened to the original queen. Within a few days I received another by mail, removed the covering from the candy, inserted the cage between the combs and closed everything. The second day following I found a mighty good-looking queen lying quite dead on the front entrance of the hive. However, I waited a few days longer before examining the combs again. When I did so I found two combs well filled with eggs, but which of the queens was responsible I probably never will know.

About the middle of June or a little later, say, about the third week, there was a regular small cloud of bees around the entrance of this hive at noon, having their play flight. By this time they were building wax spurs on the top of the frames, so I added a full-depth super. Very little work was done in this super except in the two center frames. I then decided to examine the bottom brood chamber and on one of the frames, near the end, the bees had gnawed away all the comb from the bottom and side ends and had built, by actual count, 31 queen cells. I destroyed all of them but in mashing the last one a small, dark bee ran out and mingled with the other bees on the comb. I searched for and found the old queen and clipped one wing, just as a precaution. About four days later a swarm came out of this hive and settled on the limb of a small wild crabapple tree. The queen with the clipped wing was on the ground a few feet in front of the hive. Then, while I was looking for a cage in which to put her, the entire swarm returned to the hive and, with a great buzzing of wings, went into it again.

I kept the queen with the clipped wing in the cage for four or five days, placing her with a small colony of Italians. The Caucasians, however, appeared very listless, walking around the entrance and back in again with very few flying for either nectar or pollen. Examining the combs again I found that they had removed every vestige of the 31 queen cells and all the brood was sealed with no signs of eggs or larva. So I mixed a little powdered sugar and honey, plugged the end of the queen cage and placed it on top of the frames in the brood chamber. Within a few hours everything seemed back on schedule. Loads of bees rushed out, so much so that I thought they were swarming again. However, they kept going, and within half an hour they were returning loaded down with pollen and evidently, nectar. I let matters rest for three days more, when, upon examination, I found the queen with the clipped wing laying. There were, however, the beginnings of three new queen cells which I cut out with a pocket knife.

A week later they seemed to be working diligently on every frame in the super so I added two more half-depth supers with built out comb which I had saved from the previous year. Later, when I hefted the supers and could hardly budge them, I added a super of sections on top of everything. About the middle of September I removed the two half-depth supers as well as the super of sections which was nicely filled out with the exception of three or four sections.

I can vouch for their beautiful cappings—both the combs and sections were capped crystal white. The combs were nice and fat, weighing close to five pounds apiece. The sections that were filled out weighed an average of 15 ounces each. Caucasians are prolific—there must be about seven to eight pounds of bees in the hive right now. This morning the temperature was 56 yet they were flying freely. I find that they are the first out in the morning and the last to come straggling in after sundown. I opened the hive time and again without smoker or veil and the only sting that I received was from a stray Italian of which there seem to be from 25 to 50 at all times—stragglers, perhaps, from some of the other Italian colonies nearby.

River Forest, Illinois.

• • •

BEES AND BOMBS

From November 1940, "Bee Craft"
Sussex, England

By H. E. Norman

I was "bombed out" on September 8 last, when interception apparently took place overhead, above a very low "ceiling". Jerry just unloaded, and we had the doubtful honour of receiving five bombs, far too close to be pleasant. Four of them exploded on impact, and one made a fairish crater a few feet to the rear of twenty or so hives. A few minutes after detonation, the wife and I were taking stock, and I was surprised to find the bees working quite unconcerned, and not even a hive out of place, although a lump of brick earth from "down deep" had just missed one.

Altogether, there had been sixteen deonations up to that time within a few hundred yards—so far, so good—but the wife suddenly spotted a 1,000-lb. "delayed fellow" about a dozen or so yards from the nearest hive lying—yes, lying—on the top of the ground, and we just said goodbye to house and everything. Now, since this letter is anent bees and bomb blast, I will pass over the damage to house, etc., although in all conscience it's a bitter pill.

Returning some three hours after the big fellow had gone off, I found that bits of bomb or stone (or both) had gone clean through the hives, leaving holes—in one instance as large as tennis balls—and most of the hives tipped over with wasps just playing havoc.

Now veil and smoker were buried in the debris of the garage, so I had to tackle the job without, and although the bees did not handle too well, I was surprised that they were so quiet, and am wondering if the blast stunned them (for half a mile away it was terrific). However, the water had to be kept out, and the holes later received patches over them to keep out robbers and weather until more congenial temperatures next spring, when I shall find how many stocks have gone under.

One point did interest me, and I found it only a few days ago. Less than a week after the catastrophe I felt doubtful about one stock and, whipping off the top, found wasps in possession, the combs being badly knocked about, so I just shut the entrance and thought, "One more stock gone."

A couple of days ago, I decided that that hive and other untenanted ones could go away in the dry and, lifting the one in question, I was astonished to find a bunch of bees on three bits of newly-made comb lying on the ground, surrounded by the hive stand. I placed bees and comb in another brood chamber with drawn combs, and fed straight away, and they are taking the syrup satisfactorily, and although weaker than I like, I shall see if they come through the winter.

As for general effect of blast, I did not find many dead bees, really only those killed when, in falling, the chambers parted and slid over the inmates. However, in one instance, it would seem that the blast had loosened lumps of pollen for quite a pile lay outside one entrance.

So much for my experience; probably before the next issue goes to print, some reader(s) may have something quite different to record. At the moment the bees seem contented and certainly have more life than the bee-keeper.

XUM

MARKETING HONEY AND THE BEE ENTRANCE

By A. Shallard

I think that your American ideas of marketing honey are all wrong. Just as your bee entrance at the end of the hive is wrong. It should be at the front or parallel with the combs. I note that Allen Latham, on page 483 of Gleanings for August, 1939, thinks as I do but he misses one big advantage and that is, that with the entrance at the front, you get all your pollen in the front comb and all your honey in the back combs with brood in between.

On opening a hive in the spring when the bees are weak, I know just where everything is. I can see at a glance that the bees are on three frames. I know the front comb contains pollen and the back ones honey. All I have to do is to lift out one of the latter, pull the brood apart, insert an empty comb, and the whole job takes three minutes. It is a great thing to know just where the bees keep all their valuables.

To revert to marketing: I saw some time ago that the American idea of selling honey was to make it look as pretty and attractive as sugar syrups already on the market. With this end in view a complicated plant was installed to "process" (blessed word) it and force it through a cloth. By the time they stopped messing it about, it was not honey at all, in my opinion. You are on the wrong track altogether when you try to compete with sugar syrups. You should change your method and educate the women up to the fact that the reason they have (or some have) sallow complections, which cannot face the world without war paint, is because they eat too much sugar and too little honey. Educate them to the fact that next to religion (I mean true christian spirit) honey is the best producer of happiness in the home, extant. Women nag, or most do, and they have reason to. They clog their liver and pancreas with sugar and so get bile into their blood which compels the use of paint and lip stick. No one tells them what is hurting them.

The doctors should do so, but in most cases do not. They get toothache and tooth trouble generally because the sugar they eat robs their system of the lime or calcium so necessary to give them strong teeth and bones. They go to the dentist to get the damaged teeth repaired, but they do not go to the cause of the decay, "sugar", because they do not know and no one tells them. What we are trying to do in Australia is to educate the mothers to know that sugar is the cause of "Little Willie's" and their own bad teeth, and that it would pay them good dividends to eat honey and no sugar. We are having some success.

Another of our successes in marketing honey is due to cooperative selling. We have a cooperative concern which has a turn-over of $30,000,000.

It sells all rural products and handles our honey at a very small overhead cost as nearly all the overhead is carried by the other products, butter, cheese, eggs, bacon, dried fruits, fresh fruits, in fact, every rural product. Concerns which sell only honey will always fail, that is, marketing concerns which sell honey for the beekeepers, because, honey cannot stand the over-head. There are dozens of cooperative concerns in Australia which are an immense help not only to the "man on the land" but also cooperative stores, which supply the people with goods at wholesale, plus cost of management and distribution.

There are surely the same in the U. S. A. with which the beekeepers could hook up.

Woodburn, N. S. W., Australia.

• • •

BETTY LIKES HER HONEY

By C. H. Huey

"Betty" is a pet coon belonging to Frank Pate, colored boy of Waycross, Ga. Betty likes honey and is not afraid of the bees. She will even play with them, although she handles them very cautiously with her paws.

If, Mr. Beekeeper, in your swamp apiary you find a hive with the cover off and some honey gone, look around and you may find coon tracks, for coons are very mischievous.

Frank is a coon hunter and captured five baby coons. He put them with a mother dog but she resented the sharp claws, so he reared them with a bottle. He kept one that seemed outstanding in appearance. She goes along with his pack of dogs to hunt other coons. When a coon is treed she goes up the tree and plays with it. On a trail she will take a short cut and beat the dogs

Betty, and her friend Frank.

there. Once the dogs got lost but Betty came home. She sleeps in a box in the house and delights in pulling things down.

Honey is part of Betty's diet and she has been very healthy. In an apiary she seems to smell the honey or the bees, for she likes to prowl around among the hives.

Waycross, Ga.

• • •

ALWAYS PLANT FOR NECTAR

By C. Edwin Swenson

When we beekeepers plant trees or shrubs we may as well plant for nectar and pollen not only for our own benefit but for those living after us. Seeds of biannual plants can be sown yearly.

As a nursery grower and dealer for 43 years and a beekeeper for 27 years, I have had ample opportunity to make observations as to nectar-producing varieties of trees and shrubs.

Any bee yard can use a shade tree throwing shade from the south west scorching sun. The American basswood *(Tilia americana)* with its large clean leaves not only supplies shade but an abundance of blossoms for days and weeks in July and the low hum of busy bees indicate a heavy load of nectar. The sappy roots make it an easy tree to transplant and not so many years need to roll by before your bees have another supply of available nectar. Basswood honey is recognized by most as one of the best honeys.

You may want a wind protection, or a background for your lawn or property, screening out some unsightly buildings or scenery, or you may desire to separate your lawn from your service yard or driveway by either a formal hedge or informal planting of shrubs in groups; or, you may desire to divert the flight of your bees from crossing a public road or path; then why not plant one foot and a half apart in hedge form or three and a half feet apart in grouping form the following—the Pink Tartarian Honeysuckle *(Lonecera tartarica rubra)*; the Marrowi Honeysuckle, *(Lonecera marrowii)*; the Siberian Pea Tree, *(Caragana arborescenc)*; for lower shrubs—the *Cotonaester Acutifolio*, (Quince berry); Japanese Barberry *(Barberris thunqbergii)*; or *Pettentilla fruitesca*, (Cinquefoil).

The PINK TARTARIAN HONEYSUCKLE surely deserves its last name as bees cover its bloom as though a whole swarm were there. This shrub grows mostly in early spring from the early spring moisture before the trees start much growth so grows well under trees. It becomes a large bush 9 to 10 feet of light grey bark and covered in late May with blossoms of a pinkish apple blossom shade.

The MARROWI HONEYSUCKLE is a more spreading bush, same leaves and bark but has a creamy yellowish blossom not as beautiful as the pink variety. Both are followed by red berries that are relished by our feathered friends.

The SIBERIAN PEA TREE is a small shrublike upright tree resembling the Mountain Ash in size, bark, and somewhat in leaves. About three years after planting, it commences to bloom in late May with a sweet pea blossom that is eagerly visited by bees. It also has small pods of peas that burst open in warm fall days and turn to a redish brown that adds to its fall color. Fine leaves are paired along its leaf stems which when they unfold in early spring are downy grey turning to a fresh light green making a striking color.

For a five foot hedge plant JAP-

XUM

ANESE BARBERRY which with the blossom followed by red berries is not affected or lessened by trimming, as is the case with most other shrubs. The bees work it heavily as it is generally a heavy producer of bloom and berries.

The COTONAESTER ACUTIFOLIO is another shrub used for hedge and groupings that is also visited by bees. The blue berries stay on till winter for our bird friends. The glossy deep green leaves turn red in fall; but it requires two winter stratifications to make seed sprout, thus the cost of propagation is more, as with the basswood trees.

For a 2-foot tall nectar producing shrub plant (Cinquefoil) *Pettentilla fruitesca*, a yellow double flowering shrub with odd foliage that can be used as a facing or border shrub, a long bloomer in later summer.

For the garden plant FRUIT TREES. On the lawn plant Betchell Double Flowering Crab, Dolga Crab, Hopa Crab and Mountain Ash. The French Pussy Willows are great pollen producers. We need pollen most in early spring when our native pussy willow is valuable. Pollen can be supplemented greatly in a small way by planting the large yellow CROCUS BULBS in the fall—each bulb sends up in early spring six to ten flowers each so laden with early pollen that bees will carry loads of pollen for a surprising length of time.

Plant any of the nectar and pollen producing trees and shrubs adapted to your altitude and thus increase profits from bees.

St. Peter, Minn.

• • •

4-H BEE CLUB MEMBERS ACHIEVE FINE RECORD

By R. M. Smith

Twenty-five members, consisting of 13 boys and 12 girls, were enrolled in the Forest County 4-H Bee Club this year. The 12 meetings of the club during the year were attended by an average of 41 members, parents, and friends. Frank Watson, county superintendent of schools, was club leader.

The 28 colonies owned by the 25 members produced 1,396 pounds of comb honey and 1,316 pounds of extracted honey, making a total of 2,712 pounds, or an average of 96.9 pounds per colony. The average production per hive in 1939 was 77.7 pounds. The average profit ascertained from 21 completed record books was $11.30 per colony.

Forest County 4-H Bee Club members have produced 23,170 pounds of honey during the past 10 years, making an average of 97.7 pounds per colony. Valued at 15 cents per pound, this amounts to $3,475.50.

A yield of 248 pounds of honey was the highest production for a bee club hive this year. The owner, William Motzer, made a profit of $34.07. This colony was built up from a two-pound package installed on April 23.

Twenty-two members of the club displayed 384 pounds of honey in 64 exhibits at their round-up in the Court House at Tionesta. The extension bee specialist, E. J. Anderson, reported this as the largest honey display of any bee club round-up in the state this year.

• • •

JUST A DAY'S WORK

By John G. Jessup

[John G. Jessup is a commercial beekeeper with a wide experience. We have asked Mr. Jessup to write a short article each month, in which he will share his experiences and ideas on apiary management throughout the season.—Editor.]

It is time to think about last year's Good Resolutions. Yes, we promised ourselves to keep better records in 1940. So, its high time we were taking the inventory for our bookkeeping. The supers being all stacked in rows eight or nine high it took about fifteen minutes to count them and put it down on paper for the records. Wonder why we hadn't done it sooner. Say, we have more supers of honey for feed in the spring than we realized, and a lot of supers heavy with pollen, too. They were piled together and will certainly come in handy.

As it is vacation time, son Jack, 14, has time to nail a few supers and could use the extra money. He has been at it eight hours and completed 40 hive bodies. Not a bad day's work, putting in all the rabbets—seven nails in each as well as a nail in every dovetail of the hive body.

Last year we put two coats of oil on the hive bodies after they were nailed. It took thirteen hours to give 100 bodies two coats, which is as long as it would take to paint them. Of course, you could throw it on faster but it takes time to work oil in around the dovetails and keep it going in a workmanlike way. This year we tried dipping the hive sides and ends before nailing. They told us to use hot oil. Well, we don't like

putting oil over an oil stove flame, so we just dipped them in cold boiled linseed oil. It worked fine. Two or three gallons of oil in a pan just big enough to hold a hive side was ample. The super sides and ends were dipped in the oil and placed on end to drain in a rack above the oil pan. The oil runs back to the dipping pan as it drains. It takes a day for the cold oil to penetrate but it certainly puts the oil around the dovetails where it is most valuable. It saves about three-quarters of the time that we spent last year putting it on with a brush. Queer how we have been doing it the hard way all these years.

Council Bluffs, Iowa.

• • •

SECOND GLANCES

By C. M. Isaacson

I am glad that Gleanings starts 1941 with an article like the one by Grant Morse. Some might say that it is not "practical". All the better! We need to be reminded of the reasons why we "keep bees", other than the dollars-and-cents one. The thoughts expressed will come to us often throughout the year.

Price cutting is an ever present problem. Mr. Hull points out (page 11) that there are exceptions to the general rule as to who are guilty of it, and his reasoning is sound. But there is another aspect to the case of one selling directly from the packing house at low prices. Perhaps, as the article reasons, he is not a price cutter in the sense that he does not personally lose on these direct sales, but he is making it harder for the wholesaler to pay him a fair price for the balance of his crop. A packer cannot pay, say, 5c per pound, when the very beekeepers he is buying from are helping to set a retail price of 6c—the margin is too small. Even if the honey house sales are not large in amount, they nevertheless help to set a prevailing price.

Prof. Dunham gives rather convincing data in favor of winter packing (page 12). Some arbitrary figures are included, but as the article points out, they are reasonable ones. If the assumption that the packed colonies will produce the larger crops is correct, the saving per colony will be considerable. With such a large number of colonies to obtain reports from, the figures should certainly show a definite trend, as he says. It is interesting to note from the table, that the more severe the winter losses any one year, the larger the difference in favor of packing.

Without studies such as those reported by Mr. Todd (page 14), it would indeed be difficult to realize that a single colony of bees could consume as much as 22 standard frames full of pollen in a season. It is evident that a location should be picked in regard to early season pollen plants, as well as those for the main honey crop. The studies on sugar concentration of nectars should be of value to orchardists, may help them to avoid varieties of fruit whose blossoms would be unattractive to bees, and consequently "set" poorly.

I have often wondered why anyone should want to filter honey at all —especially when it is carried to a point where the product is merely a crystal clear, sparkling syrup. Honey is perfectly able to sell on its own appearance; impurities should be removed, but **only** impurities. I think that Dr. Phillips is right in recommending the junking of all filter presses (pages 17-21). He gives a convincing point when describing the damage to color and flavor in a large amount of filtered honeys, and the ease with which it can be discerned.

Honey is an excellent energy food when "wintry winds blow" (page 22), and at any other time. In the Dec. 28 issue of the Saturday Evening Post is an interesting article dealing with Kansas University basketball teams and their coach, Dr. F. C. Allen. The last meal before every game includes a cup of honey! His teams have won or tied for 16 Conference titles in 21 years. Enough said.

I am glad that Mr. Latham agrees that the worker bee is by far the nearest to the remote ancestor of the Apis clan, for it makes his insistence on a queen to worker larva transition illogical. Our definitions of specialization must differ, though; I would think that the queen is considerably more effective at her single task than is the worker at any **one** of hers. The worker is more of a "Jack of all trades", concentrating on no single one of them.

That a genuine effort is being made to put the advertising of honey on a larger scale is shown in the editorial on page 38. It is well to see that the new work is being undertaken in cooperation with our old friend, the American Honey Institute.

RADIO AND MOVIE STAR BEEKEEPERS

By E. R. Root

Beverly Hills, the home of some of the radio and motion-picture stars of Hollywood, California, is covered with mountain sage. It is here that an apiary of a few colonies will make more than a good living and at the same time furnish their owners with a white sage honey of the finest quality. It is here on these same hills that wild swarms of bees will find a home between the walls of the houses of some of the radio and motion-picture stars. Once domiciled, they attract the attention of the home owner who is anxious to get them out and perhaps have them placed in a modern movable-frame hive of the Langstroth pattern.

This, according to William J. Fox, a plumber and also a beekeeper in Hollywood, often happens with the result that some of the stars become interested in producing their own table honey. Among the number are Edgar Bergen and Charlie McCarthy, who have several times proclaimed over the radio the merits of honey as a food, and particularly its virtue for sweetening Chase and Sanborn coffee.

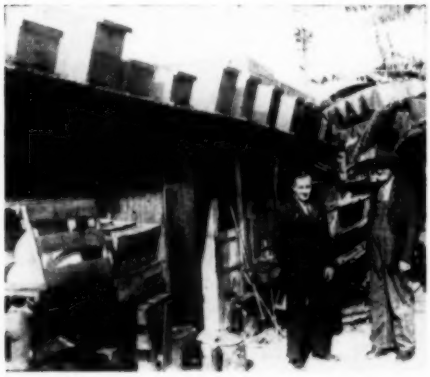


Fig. 1.

Fig. 2.

Mr. Fox, whose plumbing establishment is located at 6244 Santa Monica Boulevard, keeps bees on the roof of a shed back of his shop, as shown in Fig. 1. As a sideline, he removes bees from the inner walls of the Beverly Hills homes. As a plumber, he is well equipped for taking out a section of a wall of a building and replacing it after he has removed the colony of bees. Mr. Fox tries to show the owner of the home that these bees can be put into a modern hive and furnish Mr. Movie Man his own honey. As a result of his efforts a few of the stars take pleasure in furnishing their dinner guests with their own honey gathered and stored by the bees from the fields and garden places of their homes.

Mr. Edgar Bergen had Mr. Fox remove a colony of bees and install them in his garden. As mentioned in these columns, Charlie McCarthy, in his confabs with Mr. Bergen, has several times proclaimed honey not only from the house tops but from the top of Beverly Hills, as shown in Mr. Bergen's home, Fig. 2.

It appears that Mr. Fox furnished Mr. Bergen with an old copy of the A B C and X Y Z of Bee Culture, which he read and returned to Mr. Fox. Learning of this, I sent the 1940 edition, with the author's compliments, to Mr. Bergen. His acknowledgment of the receipt of this is shown in the full picture of both Mr. Bergen and Charlie above.

Editorials

"It is better to debate a question without settling it than to settle it without debate"---Joseph Jaubert.

Our cover picture is a row of Royal Palms at Fort Myers, Florida, near the home of the late Thos. A. Edison. The picture was taken by the Senior Editor with a candid camera film 1⅝ inches by 2¼.

• • •

Improving Bee Pasture The article in this issue, "Always Plant for Nectar," by C. E. Swenson, page 93, is worthy of careful consideration. In some areas there is a scarcity of pollen. The proper selection of shrubs and trees for planting should help to correct this deficiency. Anything that can be done to increase nectar and pollen sources will tend to increase the per colony average of surplus honey. That is what counts.

• • •

Do Swarms Fly West—Always? Since the appearance of the item with the above caption, November, 1940, Gleanings, page 710, we have received many letters from beekeepers over the country, and letters still keep coming.

It would seem, from letters received, that swarms, after issuing from hives, have no one direction that they fly. A swarm may follow any point of the compass and the direction apparently depends on conditions that obtain at the time of swarming.

• • •

Brood Rearing in Mid-winter in the Northern States Whether it is beneficial or harmful, has been up for discussion. We suggest that our readers dig down into their winter clusters, not too often, during the months of January and February, and then report what they find. It is our belief, based on extensive observation, that you will find brood in the months of January and February. It is this emerging brood that offsets the loss of the old bees during the winter, many of which drop down on the bottom board and never get out of the hive. It is nature's way of keeping up the strength of the colony.

Sun Wax Extractors on the Roofs of the Houses in Florida and California You ask can this be possible, and if so, why? Yes and no. Coils of water pipes are placed on the sunny side of the house so arranged that water will circulate in them, get heated to near boiling point by the sun's rays and then flow into a half barrel hot water tank in the bath room or kitchen. These coils on the roofs are placed under glass. As the sun shines nearly every day in the two mentioned states an abundance of hot water can be kept in readiness night and day, and without cost for a heating agent. The tanks are insulated so as to hold the heat all night and the next day the water under Old Sol is heated again. The days of no sun are so few that no inconvenience is experienced.

Some times at tourist camps the coils of pipe are placed in a box with a glass top on the ground in a place where there is no shade.

• • •

Proper Installation of Package Bees R. H. Kelty, one of the moving spirits among Michigan beekeepers, makes some interesting observations in his article entitled "Do Package Bees Pay?," appearing in January, 1941, issue of "Michigan Beekeeper." He says it seems possible that many of us have been giving packages installed early in the season too much comb space. Just enough combs for the bees to cover may be better than asking the bees to keep a full set of combs warm.

This is in line with our experiences at Medina covering over 25 years of receiving packages from the South.

Mr. Kelty calls attention to adverse conditions frequently met by packages from the sunny South arriving in the cold North with perhaps sleet or snow for a week or so. It is difficult for package bees to become adjusted to such abnormal conditions. Those receiving packages should make it as easy as possible for the bees to develop into normal colonies.

XUM

Upper Entrances Score Again It is somewhat significant that the lowest winter losses in Pennsylvania were with colonies that had top entrances as compared with other colonies that did not have them. See page 45, December, 1940, issue. Here are the figures furnished by E. J. Anderson of State College, Pa.: Colonies not packed, winter loss, 54.6%; colonies packed, 18%; colonies with top entrances, 12%. Top or upper entrances when not too large let off the excess moisture and moisture, as all agree, is the foe of good wintering. There is not unanimous agreement as to how to get rid of it. Certainly no one is bold enough to argue that moisture should go into the packing and freeze and yet there is just where it will go unless the super cover is sealed down tight. Where will it go then? It will stay in the brood chamber and slowly ooze out the bottom entrance unless clogged with dead bees, snow, or ice. In this connection read carefully the article by C. B. Gooderham appearing in this issue, page 87.

• • •

The Same Shoe Can Not Fit Every One Opinions vary as to the value of our Symposium as given on pages 638 to 651, of our October, 1940 issue. The conservatives, or those who favor the old doctrine of heavy packing, apparently believe that it is of doubtful value. The more liberal minded or those who favor the later teachings see in it something of value. Among the latter is the Editor of "The Bee World", London, England. On page 116 of "The Bee World" for December, 1940, she says:

A valuable symposium on wintering in Gleanings (October), contributed to by 16 beekeepers and summarised by Mr. E. R. Root, advances our knowledge of the principles of wintering considerably. THE SUBJECT IS A DIFFICULT ONE BECAUSE—LIKE SO MANY OTHER BEE MATTERS—IT HAS MANY INDEPENDENT FACTORS, OF WHICH THE CLIMATE (AND ESPECIALLY THE WINTER TEMPERATURE AND MOISTURE) IS ONE OF THE MOST IMPORTANT. The symposium, being mainly from the American point of view (Mr. Manley is the only Englishman who contributes practical data), gives us the opinion of experienced beemen who have to deal with low winter temperatures (sometimes 40°F or more below zero) in a climate mostly drier than our own. Some of them approve of packing; the editor in his summary points out that it has been definitely proved that it saves stores, but also agrees that if it gets wet it is worse than useless. • • • • Slight packing, such as a waterproof paper wrapper around the hive, is found good in many cases. If more substantial packing is used, it must be ventilated. This particularly applies to a damp climate like our own. Many of the writers favour the top vent (it is not, properly speaking, an entrance, serving as such only if the bottom entrance becomes blocked by snow or dead bees) described and used by Mr. Root (see B.W., 21, 13). This, with light packing, seems to be an ideal method in the colder parts of America. Heavy packing (as Mr. Root remarks) puts the colony into cold storage, so that breeding in spring is much delayed. Such stocks, like those wintered in a cellar, may use less stores than a colony wintered outside with a good windbreak and light packing, but will be much less forward in the spring.

The emphasis in the first paragraph is ours. It is indeed the "independent factors" that tend to obscure our vision of truth.

Gleanings believes emphatically in having the pros and cons have a full hearing. We have gone still further. We have let the conservatives have the last say in the belief that Father Time will solve this vexed problem.

In the meantime there are the factors of locality and temperature that must not be overlooked. The climate and moisture conditions are very different in Great Britain from most of those in the United States.

Our motto at the head of this Editorial department will continue to stand as a guiding star. Let us go further and have an open mind tempered with good will.

• • •

What About Section Comb Honey? The late George S. Demuth, editor of Gleanings, 1920-1934, in his splendid contribution to beekeeping historical writing, entitled, "The Evolution of Beekeeping Practice," mentions the different eras through which beekeeping in the U. S. A. has passed, viz.: (1) the box hive era previous to 1853; (2) the box honey era, 1853-1867; (3) the first extracted honey era, 1867-1876; (4) comb honey era, 1876-1906; and (5) the second extracted honey era beginning in 1906. (We are still in this last era.)

It is interesting to note that the comb honey era began about the time comb foundation was invented. This era was in many respects one of the most interesting and important eras in the evolution of beekeeping. It brought forth such leaders as Doolittle, Hutchinson, Heddon, Taylor, Dr. Miller and others whose writings will always occupy a prominent place in beekeeping literature.

The Federal Pure Food Law passed

in 1906 helped to usher in the present extracted honey era. The sugar shortage during the world war of 1914-1918, with the demands of our government for more extracted honey, accentuated its production. The late Dr. C. C. Miller, one of the world's best comb honey producers, showed his ability and willingness to change from comb honey to extracted honey production, which he did at 82 years of age. While considerable honey in sections has been produced since 1906 it seems somewhat doubtful if it will ever again be produced as prior to 1906. It is interesting, however, to note recent trends towards section comb honey. In the summary of the Semi-Monthly Honey Report, Washington, D. C., as of Jan. 2, 1941, we read the following: "Some beekeepers in the White Clover Belt are planning to increase their colonies intended for producing section comb or bulk comb."

Apparently beekeepers are recognizing the value of comb honey as having sales appeal. After all, what is more attractive than a clean white section containing comb honey wrapped in cellophane? There is nothing else on the food market that can be compared with it. Comb honey is in a class by itself and has a flavor of its own. Comb honey helps to sell extracted honey. .

For the benefit of beginner beekeepers it should be said that the production of comb honey in sections should be attempted only in regions that give a rapid flow of nectar. Comb honey production has some problems and the technique of apiary management may not be well understood by the rank and file of beekeepers. However, this technique can be acquired.

Would anyone be optimistic enough to hope for another comb honey era? Who knows what the next few decades may bring?

• • •

The Burning Shame of Florida —the Other Side

In our last issue, page 37, we referred to the ruthless folly of setting fire to the grass on land not under actual cultivation for farm crops. Mr. R. E. Foster, Florida's efficient bee inspector, has seen and reported how scrub and saw palmettos and other honey plants have been destroyed or ruined by these annual spring fires. Laws have been passed to stop this "burning shame", but the practice goes on apparently unabated in spite of the protests of the Forestry Division of Florida.

On page 371 of our June issue of last year, we expressed hope that the practice would be stopped now because it was burning up the undergrowth and young trees in Georgia and Florida that could be used to make news print paper. But, alas, the burning goes on as bad or worse than ever.

Well, now, while we have not changed our opinion, it is apparent there may be justification for this burning on wild unproductive land, too poor to grow trees or farm crops. This land, however, will support wild native grass on which cattle, sheep and hogs can subsist provided the dry grass in the winter or early spring has been burned over. After spring rains these areas will furnish young green grass that sprouts up abundantly, much more so than if not burned over, so it is claimed by the cattle men.

There are vast areas in central Florida that will not support crops of any sort but will furnish plenty of grass if burned over. The cattle on these lands seem plump and well fed.

Here is the crux of the whole matter: The burning of these wild lands will not hurt the interests of any one, beekeepers or farmers, but will vastly increase the food value of the wild grass for hogs, sheep, and cattle.

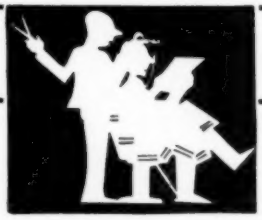
Surely the burning over of good land on which trees can grow as well as honey plants and farm crops should be stopped. The law should be enforced against burning these areas and permits issued by the State for burning over of cattle lands.

When it is remembered that Florida ranks second in the production of cattle, sheep, and hogs, the wild land on which they can subsist should be burned over, but not without a permit.

As the case now stands the cattle men are more numerous and powerful than the beekeepers and farmers. The orange and the grape fruit people do not care because they own the land on which the fruit grows. They cultivate under the trees, do not allow grass to grow under the trees and hence fires could not exist.

In the meantime the beemen of Florida must suffer because of these fires where the scrub and saw palmetto would otherwise grow to large size and furnish honey.

XUM

Just  News

We quote the following from December, 1940, Canadian Bee Journal: "According to the amendment to the Special War Revenue Act which came into force at midnight, December 2, further importations of United States honey into Canada are barred or prohibited. There is no change on the situation in exporting honey to the United Kingdom. Importers in the U. S. A. can obtain import licenses, but Canadian exporters cannot secure permits for cargo space. Latest information indicates that this embargo on shipping space is of a temporary nature, but no information is available as to when the ban may be lifted."

• • •

The Middlesex County Beekeepers' Association will meet at 19 Everett St., Concord, Mass., on Washington's birthday, Saturday, February 22, at 7 P. M. Mr. Walter M. Copeland of Lexington will talk with colored pictures of last summer's beekeepers' field meetings. Owing to the special roast turkey dinner arranged by Mrs. Colgate for the January meeting, the February supper will be in charge of Mrs. Paul Tolstrup of Malden, and will feature fish chowder, crackers, cold meats, dill pickles, hot biscuits, and honey, honey Washington pies, and coffee.—Arthur M. Southwick, Pres.

• • •

The Worcester County (Mass.) Beekeepers' Association will meet February 19 at the Museum of Natural History, 12 State St., Worcester. These new quarters are very attractive. Mr. Walter M. Copeland will show pictures.

• • •

An item from E. H. Crawford Washington, Pa., tells about a swarm that issued from a hive in that county on Christmas day. The bees belong to J. Walker Miller, of Washington, Pa. The temperature rose to 65° F.

• • •

At the annual meeting held by the Long Island Beekeepers' Association, the following officers were elected: Albert F. Dieterich, President; Frank D. Brand, Vice President; Ernest W. Graner, Secretary-Treasurer. In addition to the officers elected, an advisory board was appointed to work in conjunction with the officers in preparing the activities or the association for 1941.

• • •

Mr. J. H. Baldwin, one of Alameda County (California) Beekeepers' Association's most able and beloved members, died in his sleep on New Year's night, at his home in Oakland. Mr. Baldwin had recovered from an illness he had suffered at the end of the season and was moving his bees into the eucalyptus district where he looked forward to a successful year in 1941.

• • •

The American Honey Institute has a new recipe leaflet, entitled, "Honey the Clock Around". This six-page leaflet has the design of a clock on the cover and smaller clock designs through the pages. This leaflet features recipes for breakfast, lunch, tea time, dinner and the late evening snack. Write for a sample with prices.

• • •

Twenty-five honeybees recently made their debut when they appeared in the studios of Station WMAL, Washington, D. C., to make a recording. The buzz of the bees is used as a radio signature to introduce a nation-wide program featuring a weekly spelling bee contest which is known as the National Big Money Bee. Not unlike their human counterparts, the bees availed themselves of the perogative of having an artistic temperament, and when the time came for the recording, the "prima donna" bees refused to buzz. Someone remembered that smoke was supposed to make the bees angry and that would result in buzzing. Cigarette smoke was tried but the recalcitrant bees remained adamant. The box containing the bees was then shaken violently to dislodge the bees. Finally one of the less recalcitrant bees, said to be a soprano, started a lone dirge that gained other adherents until the buzzing attained a crescendo that was deemed satisfactory. The transcribed bee "concert" can be heard every Friday night over a National Broadcasting hookup.

Thomas Atchison

One of the most lovable, likeable, and useful men that our industry has ever known, was Thomas Atchison, who died of cerebral hemorrhage, on December 21, following a day of sickness at the hospital.

Probably no man in general bee culture in United States and Canada did more to standardize the package bee industry in the Southland, than did Mr. Atchison. While his legal authority as a state bee inspector was confined to the State of Alabama, yet his influence was felt not only in every state in the Union, but in the provinces of Canada, as well. The standards that he developed were accepted by every bee inspector in America; standards that called for full weight of packages, high quality of bees and queens, which became universal throughout the nation.

He was not only a great bee inspector, but also a diplomat. His friendly offices were accepted not only in Washington, D. C., but in almost every state capital, where bee legislation was up for consideration.

Said his superior, Commissioner Haygood Patterson, of the Department of Agriculture and Industries, Montgomery, Alabama, "The Department has lost one of its best loved and most nearly irreplacable workers." In that sentiment all beedom on the Continent will join in accord.

Mr. Atchison was for seventeen years State Bee Inspector of Alabama. Instead of using the club of the law, it was his policy to use diplomacy. Where he found incompetent producers of package bees and queens, he sought by every fair means to instruct them in putting out a better product.

Thomas Atchison.

He was fifty years of age at the time of his death and in apparent good health. Surviving him are his wife, Mrs. Maryelen Coleman Atchison and his daughter, Miss Jackie Atchison.—E. R. Root.

Cecil E. Heard

Shortly before the death of Mr. Thomas Atchison, we were shocked to learn of the sudden death of Cecil E. Heard, of Texas, on Dec. 16. He was one of the most efficient bee inspectors in the entire country. We traveled with him nearly a thousand miles on his inspection work, pictures of which are shown in our A B C and X Y Z of Bee Culture.

Like Mr. Atchison, while he had the strong arm of the law back of him, he used diplomacy instead. He was one of the fastest workers in inspection of bees that we have ever seen. He was well liked by his associates, and the writer will not soon forget our delightful sojourn with him over a large part of the State of Texas.

Like all the other bee inspectors of the country, he was one of the first to recognize that the torch is the only real cure for AFB. We have seen him burn a dozen or more colonies at one time. He explained to the owner in advance what a menace these bees, if diseased, would be and that the only way to treat was to scorch the inside of the hives, if they were good, and burn all combs and other infected material, including bees.

W. C. O'Neal, who was foulbrood inspector with Mr. Heard for two years, has been promoted to the position of Chief Foulbrood Inspector. Claude J. Burgin, formerly Foulbrood Inspector with the service, will return to Texas from South Carolina to aid in the inspection work.—E. R. Root.

XUM

From North, East, West and South

NORTHERN CALIFORNIA, Jan. 6

Weather: Here in the Bay Region, we have had an unusual amount of rain for this time of the year. To be exact, the amount to date is 25% above normal and there is little prospect of a let-up. Such changes come suddenly and that change may come tomorrow. The weather is warm and the growth of vegetation is rank. A part of the area within a radius of 200 miles has not had quite so much rain but altogether enough to guarantee good honey plants if the next sixty days are as good. The next radius of 200 miles reaches the snow covered mountains and there the fall has been heavy. While the prospect at this time of the season is so good, the next month may produce a marked change.

Condition of Bees: The condition of bees which were left plenty of honey and plenty of young bees, and also a good queen will be ready for the honey flow in February. We have had a few calls for bees in orchards as early as February. This is another thing that depends on climate and weather of the next month or six weeks. It is doubly encouraging to have calls for bees so early for during the past three or four years there has been no demand for bees.

Honey Market: There is not as much change in the way of a demand for honey as we had expected for this season of the year. There is a little more life in the demand and honey moves a little more freely.

Wax: The price of beeswax has increased some and there seems to be a scarcity of first-class wax—the kind that nearly always brings a good price.

Miscellaneous: While beekeepers are busy closing up the year, we also find them just as busy getting ready for the early honey flow which will be on in parts of our territory in thirty days. This early production of honey in California is causing great interest not only in California but in other states as well. The greatest demand for honey comes in the fall and during the winter. We are too early for that demand and instead of holding the honey, some of our beekeepers rush it to the market before there is any demand for it. The producer has bills he must meet and he insists on an offer for his honey. He gets it and the future market price is fixed and we do not have to tell you, the price is a low figure. At our last convention, this subject commanded much attention and still does, the result being an effort to change conditions. When a matter becomes serious enough to arouse the beekeepers of California, something is done. We hope to be able next month to tell you the sign of hope is above the horizon.—Cary W. Hartman, Oakland, Calif.

• • •

SOUTHERN CALIFORNIA, Jan. 1

Weather: The New Year starts off with the most ideal weather one could wish for. We have had some most beneficial rains during the past month, bringing our season's total to date to eight inches over most of our bee ranges. Grass, shrubs, and other plant life are taking on a new growth. It certainly makes for a promising season for 1941 so far as all crops that depend on rainfall are concerned.

Honey Crop: Practically all of the honey in our immediate vicinity has gone to market but there is considerable still in the hands of beekeepers throughout Southern California.

Market: Prices remain about the same with a slightly higher price being offered for sage-buckwheat. Beeswax is in good demand at slowly advancing prices.

Miscellaneous: While the government report says, "20% of bees will need feed in Southern California", we do not know of any apiaries where feeding is being carried on. True there has not been much to encourage a beekeeper to buy sugar

to feed his bees during these past few years, but we will say, most beekeepers, and more particularly those extensively engaged in the business, are leaving colonies heavy with stores at all times. This custom, they have become convinced, is the most practical as well as the most profitable system to follow. The probability of a fill-up after the white honey flow, which is our first surplus, is altogether too uncertain should all of the early white honey be taken. The price at which we have had to sell our honey the past several years does not justify the beekeeper in extracting honey that might possibly be needed for bee food.

A two-story colony that tips the scales at 60 pounds when the back of the hive is weighed as the season closes is none too heavy. The bees will not consume more than they need and it is the colony with an abundance of stores that will develop into the big populous colony that stores the early honey while the small weak sister is building up for the flow.

Some beekeepers are already moving to the orange locations feeling that they have the time now and that the colonies will build up and be ready for the honey flow as well or even better than on the summer location. There are a considerable number of our larger producers who feel that to carry on systematically they will move to the orange every year no matter what the prospects are on their summer ranges. With the exception of a few localities, the sages and wild buckwheat have not yielded well for several years and if tradition holds good 1941 should be a good season on the great unirrigated bee ranges of Southern California.

Thirty thousand acres burned over in the Cleveland National Forest much of which is in Riverside and San Bernardino Counties, is the report for 1940. Considerable of this is bee pasture which will take years to stage a come-back and be in shape to yield honey crops again. It is very fortunate that we are having such copious rains which give every seed and root a chance to get a good early start.

Bees are in good shape, disease is well under control, we have had some nice rains, and everything looks good for 1941.—L. L. Andrews, Corona, Calif.

TEXAS, January 1

The **weather** during December throughout Texas was very advantageous to beekeeping. Copious rains fell in all sections but the weather was not sufficiently cold to cause the bees any great amount of discomfiture. The bees flew on numerous days and some small amounts of nectar and pollen were collected. The scale hives show that about three pounds of stores were consumed during the month. As many of the colonies had much brood during the early parts of the month this loss in weight would indicate that the bees were able to bring in considerable stores from the field. The middle of the month only a few hives showed brood. The continuous rainfall during the past three months has allowed all of the winter annuals which provide the spring honey flow to appear in great quantity. Horsemint rosettes are found in all of the locations where that plant was formerly known. To use the words of an old-timer, "unless all signs fail we will have a horsemint crop in 1941 and as a rule this means all honey plants will yield."

Conditions: So far as can be learned the amount of bee disease present this year was less than normal. The number of colonies going into winter in normal condition is less than normal. The condition of honey plants at the present time is normal and is approximately eighty percent better than this time last year. Little can be learned about the amount of honey still in the hands of the beekeepers, as most of them are holding a considerable stock with the view of producing package bees in the spring providing there is a demand. The weather for the first time in four years has done its bit toward providing a good prospect for a fine beekeeping year in 1941. The bees which as a whole have suffered greatly through the drought period have taken advantage of the opportunity to rear a large amount of fall brood. In so far as can be predicted the spring of 1941 will see a honey crop in most of Texas. The beekeepers owe it to themselves and the bees to see that their hives are repaired and everything is in readiness for the crop of 1941.—H. B. Parks, San Antonio, Texas.

XUM

NORTH DAKOTA, January 4

Weather: The new year started out in fine style with snow falling over most of the state. This added about eight inches to the five- or six-inch layer of snow previously on the ground. High winds of late have made drifts in many places with the result that highway traffic has been temporarily tied up, but "it's an ill wind that blows no good"—the additional snowfall will improve the moisture situation and afford greater protection for honey plants, and the snow plows are taking care of the drifts.

Prospects: From present indications the coming year should be a good one for beekeeping in this section. Excellent stands of young sweet clover were observed in fields over much of the state and unless winter killing or some other unforeseen calamity happens to the plants, there should be an abundance of sweet clover bloom this coming summer.

Conditions: Reports of late indicate that cellar-wintering colonies are in good condition—most beekeepers here winter their bees in cellars. No report is available on outdoor protected colonies but it is probable they're wintering satisfactorily—unless the severe storm in November had too damaging an effect.

Miscellaneous: The North Dakota Beekeepers' Association held its annual business meeting in Fargo on Friday, December 13, 1940. Mr. Charles Hausmann, of Hillsboro, N. D., is the new president and Mr. Arvid Benson of Fargo was re-named secretary-treasurer. There was a good attendance. Considerable attention was devoted to the discussion of legislation affecting the beekeeping industry of the state. It was the consensus that the present bee license law should be continued because the license fees go directly to the support of bee inspection work. However, it was felt that the present law providing for the inspection fees of 10 cents per colony for the first 100 hundred colonies and five cents per colony for larger numbers should be abandoned or amended so that such revenue would support the bee inspection work. At present the law provides for the inspection fees to go to the "General Fund" and hence, such revenue is not available for the bee inspection program.

Marketing: While the honey marketing situation is not encouraging from the standpoint of prices, the supply of honey in this part of the country is probably lower, for this time of year, than it has been for the past decade.

Much of the honey has been disposed of in car-lot quantities to large buyers in this country and Canada.

Most of our local stores are still selling honey in 5-lb. pails at prices ranging from 35 cents to 40 cents and strange to say much of this honey is shipped in from distributing agencies located a few hundred miles outside the state. It would appear from this that producers of this area feel that they are farther ahead financially in disposing of their honey in 60-pound containers, in large lots, and leaving it to the large packaging and distributing agencies to put the honey in small containers, label, and take care of its distribution.—J. A. Munro, Fargo, N. D.

• • •

WISCONSIN, January 6

Here are some of the highlights from reports received from a group of 62 beekeepers located in all parts of Wisconsin. Holdings of from one colony to approximately 400 are represented. The largest production reported for a single colony varied from 30 to 350 pounds.

A similar report for 1939 with 65 beekeepers reporting showed 5,125 colonies with an average production of 98.6 pounds per colony with a gross revenue of $6.63 per colony. In 1940, 3 less of this same group of beekeepers reported on 5,112 colonies; the average production per colony was 93.59 pounds, and the average gross return per colony $5.57. While the production per colony does not seem to vary with that of other years, the most important trend shown is generally lower prices in 1940. More honey was sold wholesale at a lower price in 1940 than in 1939. Prices in 1940 reportedly ranged from 4½c wholesale with cans and transportation furnished to 8c a pound. Prices for 5-pound pails of honey ranged from 35c to 65c.

It is evident from the reports that the cutting of basswood trees, the killing out of clover by drouth and cold winters, and the replacing of clover by alfalfa, all play an important part in the future beekeeping picture in Wisconsin.

Several beekeepers not included in this report who have dropped in to the office state that their production was down in some cases because the past season the bees were not ready for the honey flow, and in other cases because the nectar did not seem to be available. But no serious reductions have been reported.

An unusually long honey flow occurred in the vicinity of Madison which produced a crop that otherwise would have been considered a partial failure.

The quality of last year's honey was reported as unusually fine.

The honey market as a whole seems to be rather slow at this time.

We have been informed by reliable sources that competition is very keen for the position of Chief Apiary Inspector in Wisconsin, the position left vacant by Mr. C. D. Adams who held this position from 1924 until 1940. Mr. Adams' many friends in beekeeping circles will be glad to know that he is well and as active as ever in his new position of dairy and food inspector, with headquarters at Milwaukee.

Mr. John F. Long, a beekeeper of Westfield, Wisconsin, is Acting Chief Apiary Inspector. Mr. Long is a graduate of the University of Wisconsin.

Announcement of the appointment of a chief apiary inspector is expected momentarily.—Prof. H. F. Wilson, Madison, Wis.

• • •

OHIO, January 8

Weather: In Ohio, we have had considerable variation in weather conditions. The latter part of the fall season was more like winter, and winter which arrived on December 21, was more like spring. In fact, my wife and I had a picnic lunch near one of our bee yards on December 24 and the bees were flying as freely as in the springtime.

Crop Conditions: Clovers look fine just now but, of course, we realize that the coming three months without a covering of the beautiful snow may cause considerable heaving and we all know what that does to young clover.

Bees: "The Golden Throng" in most parts of Ohio have gone into winter in prime condition and have had a number of valuable cleansing flights. At this writing the clusters are quite large. They have, however, consumed an excessive amount of winter stores. If we have any great amount of open weather during January, February, and March, feeding will be necessary in many yards. Better heft them occasionally to be sure of their food supply. Remember, clusters are exceptionally large for mid-winter. They all celebrated by having honey for Christmas.

Honey: There was some surplus fall honey and the crop for the entire season was not up to par. The color this year was fine but was rather irregular in moisture content. The moisture content varied from 16.4% to 21.75%. According to the information I am able to gather the crop is about 75% sold in Ohio. Honey will be scarce by the time the new crop is harvested.

In a good portion of the state "price cutting" appears to be uppermost. Some prominent bottlers and some producers have had their product on the grocer's shelves at prices as low as 39 cents for five pounds in glass and tin; smaller packages in proportion. Truly a "Comedy of Errors," or perhaps—a compound fracture of good business judgment.

Miscellaneous: I am in favor of another Symposium. It gives beekeepers an opportunity to explode and tell what they know and what they think they know and to learn the views of others on the same subject. Following this is a number of reports from the critics. They are all good and in the end we discover some ideas that are really practicable and we may profit by their use.

In reality one sometimes wonders if the beekeeping industry and the honey business have been really "scratched on the surface." Could it be possible that the industries of this nature in 1960 would look at our present-day methods as completely obsolete? Colony production may be double that of the present day. All honey placed on the market will have the same moisture content or at least be labeled giving the moisture content. Honey may be conditioned by radio beams or some other electrical contrivance, without

being heated and all of its health qualities and excellent flavors may remain intact, which will increase the demand many fold. Yes, this may sound foolish but it is possible. There are people who will laugh at this prediction but just go right ahead and enjoy yourselves. It will not injure my feelings as I am like the friendly old Negro—"I never puts anybody in my despisery."—W. A. Coulter, Columbus, Ohio.

• • •

NEW JERSEY, January 6

Honey Flow: For the second year in succession the honey crop of this state has not been up to the beekeepers' hopes. This does not mean that poor crops, or crop failures entirely, were common, for beekeepers that come into that classification are probably a very small minority. The crop of many beekeepers has been reported at meetings to average over 100 pounds per colony. Light honey is very short and in much of the area that usually produces a very excellent table honey in good quantity there was produced a later crop of only fair quality and quantity. Comb honey of good quality was produced in but very limited amounts. Too much rain during the summer season would seem to be the main cause of this condition. Especially in the northern part of the state the fall flow was generally above average and bees in most areas had the opportunity of going into winter quarters in excellent condition.

Weather: Throughout the state the first killing frost made a late appearance. The bidens in the south and the asters in the north continued to yield until dried up. November and the early part of December were more like winter than winter itself. The last part of December was very mild, much of it more like April or May than winter. Christmas day for example was very springlike. The official temperature at Newark airport weather station recording 61 degrees at 2:30 p. m. which, strangely, exceeded that of last July 4th by four degrees. We really appreciate such weather while it lasts for we can expect much worse to come during January and February.

Honey Sales: In the generally accepted meaning of the term there is no sales problem here, situated as we are in or near the largest and richest center of population in the world. How much of this potential market goes to each individual depends almost entirely upon the ambition and energy expended to get it.

Local honey merchandisers will watch with interest the progress of the newly formed Finger Lakes Honey Producers' Co-op. for several reasons. First, they are specializing in crystallized honey. Secondly, they are organized in a sensible, businesslike, and practical manner. Thirdly, they are patterned after the successful Ontario Co-op. and strict grading rules are promised. All of these are news now and if the movement grows will be bound to improve the honey market in general and eventually will change the price of honey, both wholesale and retail.

Miscellaneous: In this column we have previously noted that spotted knapweed (centaurea maculosa) is eagerly worked by bees, especially in dry weather. In reply to inquiries I can give no more definite information than that. Several have reported poor success in getting the plant started from seed. Miss Jessie G. Fiske, New Jersey State Seed Analyst, (Agricultural Experiment Station, New Brunswick) has this to say about spotted knapweed: "It is listed by our authorities as biennial or perennial and has a fairly wide distribution in northern New Jersey in roadsides or waste places. I would not say that it could be propagated easily from seeds, but most of the compositae do produce seeds in prolific numbers, and as they are viable undoubtedly propagation could be made." As nearly as I am able to tell by personal observation the seeds seem to fall as soon as ripe. Once a single plant is started others start around it readily.—John Conner, Caldwell, N. J.

• • •

VERMONT, January 6

Weather: For Northern New England, 1940 was a cold year. Only the month of July was entirely without frost. We had frost June 22, and another August 24; not enough to do any great damage, but still a frost. Cold weather continued throughout the fall and so far

this winter. One morning in December the temperature fell to 20° below zero. Christmas week brought warmer weather, that is, a little above freezing, and with it, considerable rain which melted all the snow in the Valley. It has turned cold and six inches of snow covers the ground again. At no time since early November have the bees had a flight nor will there be much prospect for one until spring. With good bees, good packing, and good food, they can go without a flight for five months without any trouble. If the snow stays, clovers should come through in good shape.

Honey Crop and Market: Our crop was average this year, about 75 lbs. per colony. The bulk of my honey is sold in glass, from 5-oz. to 5-lb. jars to distributors. As we try to produce and pack a good, well ripened, attractive product, we have had no trouble so far selling the whole crop at a good price.

Miscellaneous: It has been my pleasure to be with the Essex County beekeepers at their monthly meeting on January 2. Nowhere do you find a more enthusiastic bunch of beekeepers. With most of them it is just a hobby, but the work they do in spreading the good word of bees and honey to the heavily populated areas in which they live, is invaluable to the industry as a whole.

At this meeting, the subject of the carbolic screen was discussed. There is no question but that considerable damage has been done to honey by the careless use of the screen. While I have developed the carbolic screen and used it for 10 years, I have never had the slightest taint in any of my honey, hot or cold, in all these years. Apparently, the main causes of tainted honey are: using a substitute for the pure clear white carbolic acid, or using too much of it. There are other substances of the creosol family that will drive bees out of supers, like creosol, CN disinfectant, crude carbolic acid, etc., but all of them will taint the honey. Also, never add anything to the acid such as alcohol and not more than 15% water to the crystaline form. The liquid form should be undiluted. The cloth on the screen should never have enough acid on it to make it wet, only enough to make it dry damp. A few tablespoons of acid for one application to the screen should last several days. Make sure not a single drop of acid falls onto the combs, or hundreds of pounds of honey will be ruined. One pound of acid properly used is enough to take off 5 to 10 tons of honey. Careless beekeepers should stick to bee escapes.

As usual of late years, work interfered with deer hunting. Hope we can sneak away once a week until May for skiing.—Charles Mraz, Middlebury, Vt.

• • •

MASSACHUSETTS, January 3

Conditions: Perhaps 1940 may be summed up as the poorest year for honey production in many years. Many colonies were actually starving in August, and with a complete failure of buckwheat to yield a surplus, most colonies went into September under difficult conditions. Goldenrod produced some small surplus which stimulated brood-rearing, and this along with other autumn sources kept up the brood-rearing. Few colonies were able to make their own winter stores. Many colonies had to be doubled-up or united, or else fed heavily with sugar to prepare them for winter.

October and November gave many days for flight but, of course, there were no stores to gather. December was much colder than usual with a few days of zero temperatures, which made liquid feeding difficult or impossible.

The past week has been mild and some flight has been noted, and the bees appear to be in good condition. I expect to see considerable losses in colonies not provided with winter stores, but where attention to feeding has been given there should be no cause for alarm. The beekeeper is optimistic, and most of us are looking forward to 1941 with hopes of seeing a good year for the bees. Some favored spots in and about the state reported good yields of honey but most of this was from sweet clover which is not any too plentiful. Sweet clover grows well in Massachusetts, but is not planted to any extent. Beekeepers would do well to encourage the cultivation of sweet clover, and if each beekeeper scattered a peck or two of seed each year we would soon find better yields the rule rather than the exception.—R. E. Newell, Holliston, Mass.

ONTARIO, January 4

Weather: December gave us unusually cold weather for the first eighteen days followed by a spell with light to heavy rains which took off all of the twenty inches of snow that covered the fields. Today we have only an inch or two of snow covering the fields. Weather has turned colder again with a temperature of about 15 above zero. During the mild weather bees had no chance for a flight.

As snow came before we had the severe weather of early December, no frost is in the ground and streams are all clear of ice. The forecast is for colder weather so winter will soon be with us again.

Fields of winter wheat as well as alsike and other clovers are as green as they were in September, and when driving over the highway recently the country had more the appearance of spring than of late December.

Markets: There is no change in the honey market situation so far as local sales are concerned, as there is little or no honey in the hands of producers. During December no shipments were made to Great Britain as no space could be secured on boats. The controller of shipping for Great Britain refused space for the time being on honey and several other commodities, giving preference to other articles deemed more necessary. Of course, with such drastic changes occurring so rapidly in international affairs one would indeed be rash to make any definite prophecy as to what to expect.

Beeswax is still in keen demand and prices seem to be steadily advancing. As we have no more for sale, higher prices will not help us. With increasing prices of beeswax, a higher price for foundation may be expected.

Miscellaneous: Mr. Isaacson, on page 31, asks a pertinent question, "what makes a bee old—time, or destruction of the body tissue through work?" The only answer to that is the one he gives for we all surely know that bees reared during the season of gathering honey and heavy brood-rearing live but 40 days or a bit longer, while, on the other hand, bees reared in August and September will live till the following spring. The writer of these notes has long believed that brood-rearing wears out the bees more than we usually think. During the last 50 years or more we have now and then had strong colonies get hopelessly queenless by losing their young queen on her mating flight or for some other reason not always apparent. They would remain very strong for weeks but if a young queen were successfully introduced and brood-rearing started the old bees would drop off amazingly fast. It has always seemed to me that brood-rearing helped to accelerate the death of the old bees, but not being a scientist of course we cannot prove this to be the case.

We know of at least half a dozen or more Ontario beekeepers operating from 500 to 1,000 colonies who winter in single body brood chambers and who feed colonies in September or early October till they are solid for winter, in so far as stores are concerned. Need I tell you that these beekeepers never have heavy winter losses and that they usually have very high average honey crops? We are not defending or condemning the practice of so much feeding but simply stating facts well known to many others as well as ourselves. And here again, we have always believed and still believe that brood-rearing was so restricted owing to the plain fact that little space was present for brood-rearing until late February or early March, that the lives of the old bees were lengthened because of less activity in the hive and less strain on the vitality of the bees. And again, even if it were possible to have all colonies boiling over with bees and ready for a honey flow in early spring, who in Ontario at least, would want that condition? We could not look after them at that time of the year and whether right or wrong we have always observed that nearly if not all colonies reach their peak of strength at a certain time and we want them at their best in so far as possible, right at the beginning of our main honey flow. On page 751, December Gleanings, we are plainly told by inference that we do not know when colonies have wintered well. We accept the reproof with all humility but we do still claim to know the condition that bees should be in, **in our locality**, in order to obtain the best results when we have a honey flow.—J. L. Byer, Markham, Ontario.

Heads of Grain from Different Fields

Bees and Red Clover

During the season of 1940 the bees worked quite well on red clover, but I saw few bumble bees working thereon. The same was the case in 1939, with hardly any bees visiting red clover. In 1939 the field of red clover was about as large as that which we had in 1940. The yield of red clover seed in 1939 was 21 bushels and in the season of 1940 we thrashed 100 bushels of red clover seed. Whence the difference? Is it attributable to the bees or to some cause unknown to me?—Bro. Alphonse, O. S. B., St. Meinrad, Ind.

[Conditions for nectar secretion may have been more favorable in 1940 than in 1939. These conditions may have caused more bees to visit the blossoms than during the previous season which resulted in a larger crop of seed in 1940.—Editor.]

• • •

A Unique Way to Catch a Queen to Clip Her

When I first started working with bees I wore gloves, at least I thought I had to. Everybody knows trying to catch a queen with gloves on is impossible and when I pulled my gloves off I became very nervous. I discovered that a "West" spiral wire queen cage is just the thing for catching the queen. With gloves on or off I would hold the frame with one hand resting it on the hive while with the other I would take the cage, first bringing it down over her head and closing it against the comb. As soon as the queen started up into the cage I would close it with my thumb or finger, go indoors near a window, remove my veil and gloves and clip her wings.—Fred Krause, Jerico Springs, Mo.

• • •

Keeping Honey Sales Up

Do you want a little repeat honey business without much effort? This one is for those of us who sell from door to door. If you leave Honey Institute literature or recipes, have your name and address on it. You can buy a rubber stamp and ink pad in a dime store. Tell the housewife she can re-order by sending a penny card to your address on the folder. Better still, if you happen to be on the same telephone exchange, have her call you.

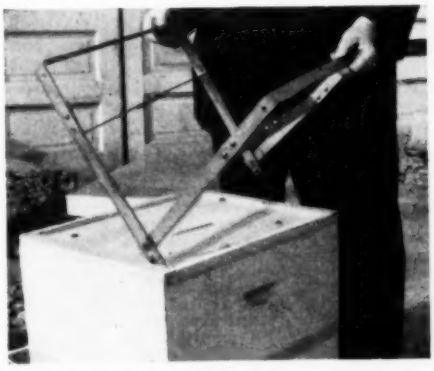
You will be surprised at your mail and telephone orders. Why not try it? At least they will remember you the next time around.—Milton Eggert, Grand Meadow, Minn.

• • •

Bees Go Visiting on Christmas Day

In Dayton, Washington, a queen bee decided to change homes for Christmas. Charles Biggs had a hive of bees that swarmed on the 24th of December. He blamed the balmy atmosphere for causing the first swarm he has had in December in forty years of beekeeping.—L. H. Kohr, Seattle, Washington.

A Handy Hive-lifter



Mr. E. B. McCracken, of Fargo, North Dakota, has a hive lifter which he says he could not get along without. He says it is of great help to him when carrying the hives in and out of the bee cellars. From these pictures its operation looks simple.

XUM

Asked and Answered

The Movements of Bees' Wings

Question.—I read a short time ago that the wing beat of the honeybee is 190 beats a second and 11,500 beats a minute. Is this true? I also read that the thorax of the bee contains two sets of muscles—one to lift the wings and one to depress the wings. If this and the above are true the bee certainly has wonderful co-ordination. Does the beat of the wing mean a down stroke (or up) or a down-and-up stroke?—Gorton Carruth, Jr., New York.

Answer.—The wings of the honeybee are said to rotate at the rate of approximately 190 revolutions per second. We quote the following from Dr. E. F. Phillips' book entitled "Beekeeping": "The motion of the wings in flight is in four directions, up, down, forward and backward. The combination of these movements causes the wing tips to describe the course of a figure 8, if the insect is held stationery. The hind wings are small and are attached by hooks on the anterior margins to thickenings on the margins of the front wings. They are not provided with large flight muscles of their own, but are carried along by the action of the powerful muscles of the mesothorax, which propel the fore-wings. The muscles of flight are in four sets, corresponding to the four directions of wing movement. The wings are moved into the right position by muscles located inside the pleura of the two thoractic segments. After the wings are in position for flight, the compression of the thorax by the vertical muscles lowers the dorsum and raises the wings while the contraction of the longitudinal muscles raises the dorsum and lowers the wings. The vertical muscles, are, therefore, elevators and the longitudinal muscles are the depressors. The movement of the wings during flight are, therefore, produced mainly by changes in the shape of the thorax. The forward and backward movements are accomplished by the action of the muscles of the pleuram, acting directly on the bases of the wings. The power of the wing muscles is shown by the ability of a worker to fly from the hive carrying a drone, which weighs much more than the worker itself."

Combs Containing Some Granulated Honey

Question.—I have some combs that I did not let the bees clean out after I extracted them. The honey that remained in them granulated. Will this cause the honey extracted from them every year to granulate even though I did allow the bees to empty them this fall?—Junior Welter, Iowa.

Answer.—We suggest that these combs be placed on your colonies a little in advance of the honey flow next season so that the bees may clean the combs out thoroughly. If you do this, there is not likely to be any granulation as the result of small particles of granulated honey left in the combs. If you place these combs on colonies during a honey flow there would be a greater danger of their causing granulation.

Liquefying Granulated Honey

Question.—We had a late honey flow here this year and a great deal of my honey is going to sugar and I wondered if there was any way I could fix it so I could sell it.—Oakley Webb, Indiana.

Answer.—We assume that you are producing extracted honey. To liquefy honey that has begun to granulate, simply place the container of honey in a wash boiler, permitting the container of honey to rest on two sticks, so that the bottom of the honey container does not touch the bottom of the boiler. Pour water into the boiler to surround the container of honey, and then heat the water not hotter than the hand can bear. In a short time, a few hours, the honey will become liquefied. If you have a liquid thermometer, you can bring the honey to 160 degrees Fahrenheit leaving it at this temperature for about fifteen minutes and then cool the honey. This will retard granulation for a time and destroy yeast that might cause fermentation.

Creosote Paint for Hives

Question.—I have been using creosote paint for some years on winter cases for bees and it is such an excellent preservative and so much cheaper than oil paint that I would like to extend its use to bottom boards and even to hive bodies if it would not be objectionable to the bees. I winter part of my bees in the cellar and am not sure that the smell of the creosote, which never seems to entirely leave lumber so treated would be healthy for the bees under those circumstances also would there be some danger of tainting of honey stored in a warm honey house in creosoted boxes?—Fred E. Smith, Ontario.

Answer.—With reference to the

advisability of using creosote paint on bee hives, there may be danger of tainting honey in the case of supers treated with creosote and containing honey stored in a building. Honey has a delicate flavor and is susceptible to odors, especially when confined in a warm building. We hardly think the creosote would affect bees in a cellar.

Managing Double Brood-Chamber Colonies in the Spring

Question.—I have placed my bees in double bodies and would like to know if I will have to do any manipulating in the spring. This is my first experience with double bee bodies, and would like to know what to expect when spring comes. Would you advise removing the lower bee body and placing it on top? Will this help prevent swarming? Will you please give me some information in regard to this?—Trask Rilley, Pennsylvania.

Answer.—You should have no trouble in manipulating your colonies in double brood chamber hives this coming spring. If the top brood chamber, sometimes called the food chamber, is quite well filled with honey, in addition to what honey may be in the bottom or second brood chamber, your colonies are likely to be very strong in bees this spring. It may be necessary for you to add a super of drawn combs at the beginning of the fruit bloom honey flow in your locality, in order to give your colonies ample comb space for brood-rearing and for the storage of incoming nectar. Some beekeepers practice reversing the position of the two brood chambers in the spring. This hardly seems necessary, in our opinion. If you provide ample storage space, in the way of extra supers, the bees will move some of the honey out of the double brood chamber up into the super and thus relieve congested conditions.

Killing Bees in a Hive

Question.—How can I kill an entire colony in a hive so that the honey can be used?—Lawrence L. Westcott, Virginia.

Answer.—To kill a colony of bees, use Cyanogas. This can be obtained at drug stores in pound and half-pound cans at the rate of $1.00 per pound. When the temperature is moderate, throw a tablespoonful of Cyanogas into the entrance of the hive. The bees will die immediately. The chemical does not injure the honey or make it unfit for human consumption.

Number of Colonies Per Apiary

Question.—How many colonies of bees should I keep in one yard and how far will bees fly from one yard? I want to have around 25 or 30 colonies of bees working from one yard so that I can look after them.—J. T. Groom. Texas.

Answer.—With reference to the number of colonies it is feasible to have in one yard, this depends somewhat on the nature of the locality. Here in the North, commercial beekeepers usually have from 40 to 75 colonies each yard and the yards are at least three miles apart. Where bee pasture is not plentiful, it would be safer to keep fewer bees in each apiary. Assuming that beekeeping possibilities are normal in your locality, it would certainly seem possible for you to keep from 25 to 30 colonies in one yard. As a rule, bees will fly a mile and a half or farther in search of nectar. You will realize the large acreage available to a moderate sized bee yard, provided, of course, comparatively few bees are kept in the vicinity.

Queening a Laying Workers' Colony

Question—I had difficulty this summer in introducing a queen to a stock which was queenless and in which laying workers were present. Can you tell me how to get over the difficulty?—A. L., Inverness.

Answer.—There are various methods of meeting such a case. Amongst them are adding a frame of brood with a queen cell, introducing a virgin queen, running in an old queen using smoke, and uniting the stock with one which is queen-right. But, probably, the surest of all is the introduction of a fertile queen by the honey method. A frame with sealed honey and brood is taken from the hive and placed flat on a level surface. With your finger make a depression in the sealed honey. Dip the queen in the depression covering her completely with honey. Let her crawl slowly and place the frame cautiously into the hive. The queen will start laying without delay.—From The Scottish Beekeeper, Edinburgh, Scotland.

Dead Bees at Hive Entrances

Question.—I find quite a number of dead bees on the snow near the entrances of hives. Is this a sign bees are not wintering well?—J. R. Packard, Michigan.

Answer.—On the contrary this is a sign bees **are** wintering well. If we do not find some dead bees at hive entrances during the winter we become concerned about the bees. Old bees, those born early in the fall or late summer, begin to die off during the winter. During mild spells of weather these old bees that fall from the combs are carried out and deposited on the alighting boards.

XUM

Talks to Beekeepers

M. J. Deyell, Editor.

I'm worried. Put yourself in my place. Here I am with another assignment ahead of me,—that of writing the 1941 series of "Talks". This is my eighth year on this work. I enjoy it. The reason I am somewhat worried is that I may not measure up to what is expected of me and perhaps my writings may grow stale. I presume most people who write experience this feeling, occasionally at least.

My job is to guide beginners and more experienced beekeepers (if the latter class consider it worth their while to read my "Talks") along the road to successful beekeeping. My task isn't easy, especially during these later days when there are differences of opinion, even among experts, regarding the application of principles that govern success in beekeeping. As I have said in past talks, the principles of beekeeping never change and are the same the world over but the application of those principles varies as to locality.

In presenting these "Talks" I shall try so far as possible to avoid repetition, even though it is necessary, for the benefit of beginners this year, to mention again, some of the points brought out in former talks. I shall try to do what teachers and lecturers frequently do,—dress up old truths and principles in a new garb that will make them more appealing.

Getting a Bird'seye View of Beekeeping

It seems to me that all beekeepers, those with one or two colonies in the back yard, sideline beekeepers with 20 to 100 colonies, and commercial beekeepers who depend wholly on bees for their livelihood, as well as those who plan to take up beekeeping should take time to view beekeeping from the proper perspective in order to get a more comprehensive conception of our industry and its possibilities. Most of us engaged in beekeeping are so close to it that we may fail to take time out to get this bird'seye view.

When beekeeping is mentioned to the average person he may think only of hives of bees and honey. There is more to the beekeeping industry than that.

Not Enough Bees to Pollinate Blossoms

It has been said that bees are at least fifteen times more valuable for pollination than they are for gathering honey. Fruit growers and producers of clover seeds must have honeybees to insure maximum yields. Fruit and seed growers, when they become fully aware of the important part honeybees play in pollinating blossoms, will give our industry a tremendous boost.

A few years ago one of the scientific men in Ohio did some experimental work on insect pollination of alsike clover. Three of the ten plots of alsike clover used in the experiments had to be cut for hay because there were not enough honeybees available for pollinating the blossoms.

At the Omaha national meeting held recently a commercial beekeeper from Iowa said growers of alsike for seed begged him to move bees near their fields of clover when in bloom during the past season.

Our Country Could Stand More Bees

According to the tabulation compiled by the U. S. Department of Agriculture, Bureau of Agricultural Economics, as of June 1, 1937, the total number of colonies in the U. S. in 1936 was 4,402,550. This means only one colony for each approximately 250 acres. (Unfortunately for our industry this tabulation which came out annually for some years prior to 1936, has not appeared since. We need it.)

It has been said that at least 85% of the nectar secreted in the U. S. A. goes to waste annually for the lack of bees to gather it.

The average estimated yield of

honey in the U. S. A. for seven years, 1930-1936 was 163,191,157 pounds and this amounts to approximately 35 pounds per colony. This amount of honey, if used in this country would amount to a little over one pound per capita. The per capita consumption of sugar is over 100 pounds.

It would seem from the foregoing that our industry is not troubled with over-production of honey but rather with under-consumption. Honey needs more publicity. Our American Honey Institute, Madison, Wisconsin, is doing splendid work in publicizing the virtues of honey.

Bees Are Different

Of the approximately half million kinds of insects in the world the honeybee is one of a few that is used commercially. Entomologists are busy destroying insects that are enemies of mankind but in the case of the honeybee it is propagated because of its value to man.

Some seem to imagine that bees can be tamed or domesticated. It is a fact that they can be and are kept in hives and handled, but bees kept in an apiary are no tamer than bees found in bee trees and both kinds respond to stimuli in the same manner. Those who imagine bees are tame may be surprised to see a swarm issue from a hive and start for the woods. The biggest swarm I ever saw took a notion to issue from one of my hives in northern Michigan. It didn't cluster on a tree, but made straight for a big woods a mile away. I started after it in an old Ford, but lost the swarm at the edge of the woods.

Bees are different from chickens, cows, or other farm animals. Bees will feed themselves,—that is, if the owner has sense enough to leave enough honey for food in the hives.

If, at any time during the season, the owner of bees wishes to go on a vacation, he may do so. The bees will feed themselves, and they will not over-eat, as domestic animals sometimes do if an abundance of food is put in front of them.

Nowadays some commercial beekeepers in the North sell their honey in the fall, pack their colonies outof doors late in the fall, or place them in bee cellars, leaving each colony an abundance of honey; then go South to bask in the sunshine and escape the severe northern winters.

Moving Bees South, then North

Some beekeepers are now moving a part of their colonies South late in the fall, in order to have some bees to play with during the winter, also to secure some surplus honey and to increase the number of hives and to have very populous colonies to move North late in the spring, in time for the major honey flow. This may sound alluring, but if I am not mistaken it is not likely to be profitable. Transporting bees, finding suitable apiary locations, and applying the correct management to suit conditions isn't as simple as it may seem.

Package bees are priced reasonably. Why not let the southern bee shipper who is familiar with conditions down there worry about producing the bees and queens needed?

The first time I went South was 27 years ago this coming April. The A. I. Root Co. had shipped a car of 300 colonies of bees South the previous fall, in November, locating them along the Apalachicola River in Northern Florida, near the Gulf. During the early spring the men in charge had increased the one car of bees to three and it was my job to bring some of the bees North to Medina.

Rode in a Freight Car Five Days With 5,000,000 Bees

Yes, that's what I did but I would not do it now. But before the 300 hives of bees were put into the freight car they were transported 100 miles—from Apalachicola, Florida, to Bainbridge, Georgia, on an old back wheeler boat, the Mark Twain type. (You North Florida beekeepers know what I'm talking about.) It took 24 hours to make 100 miles as the river is so crooked that you meet yourself going back.

It took a day, with ample help to transfer the bees from boat to stock car. Hives were screened top and bottom and placed on staging nailed solidly and so arranged that bees could be watered enroute with a sprinkler can, from a passageway in the center of car. The bees drank four 50-gallon barrels of water on the trip. I had my bed near the door and as I tried to sleep nights I could watch the rows of hives in the light from a dim lantern, weaving around as the fast freight hit 60 or 70 per.

Some time I may write up this entire story, if it would be sufficiently interesting to readers, but this will suffice for now.

XUM

Spinster

Jane Says;

Ask the first person who comes into your home, next spring, "Come see our bees!" and what reply are you sure to get? Isn't it, "Goodness! No! I don't want to get stung!" Speak of beekeeping as the most interesting, and easiest work in the world. Tell that it pays big dividends on the money invested, if the season be good. Explain how fine it is to work out in the open rather than be shut up in some stuffy office or mill. Laud it to the skies, as you must if you are an enthusiastic bee-lover and the same thing happens. You hear, "I just couldn't keep bees! They sting!"

To gather roses you must get pricked by thorns; hard manual labor raises blisters; hard mental work brings headaches. In everything in life worth having there is some pain or discomfort to be suffered, some obstacle to overcome, backbreaking toil or heart-breaking effort. And yet in all someone succeeds. True, we may become discouraged at times, but success is the shining goal reached by those who do not despair. And what of bee stings, the poor little insect's only means of defense?

Perhaps in the long, long ago, when the drones were workers—and may hap fighters, too,—perhaps then there was never any provocation for the females to use this weapon. Who knows! But when males deteriorated or degenerated though for what cause we never will know,—then instinct taught these valiant little ladies to use the same wisely and well. Perhaps they were used to get rid of the weaker sex,—the drones.

We hear bees berated and maligned because of their stinging propensities, but there is something that should be shunned much more than stinging bees, and that something is stinging, gossiping tongues. And like Mark Twain and the weather, "A lot is said about it, but nothing done". Only at rare intervals do we hear of slander cases coming up for hearing.

Bee stings hurt, but the hurt doesn't last long. Gossip hurts worse, and the hurt sometimes lasts a life-time. Gossips are the subversive element, the fifth columnists planning against our peace. They are as deserving of punishment as the fifth-columnists plotting against our national unity, and yet they go scot-free.

Bee stings are poisonous,—yes,—but by a master hand they may become a cure. Not so with gossip. It poisons and kills.

We all have a yen to turn over a a new leaf, almost before the New Year bells have done ringing in the New Year. We make fine resolutions,—and break them; but all of us should agree on one really worthwhile resolve. It will work magic in our communities, cement friendships, teach us forbearance. Here it is: "I resolve to speak no evil of anyone." Will that not save us much regret?—Spinster Jane.

Honey to be Advertised Throughout the State

Honey will be advertised throughout Wisconsin by the Wisconsin Department of Agriculture cooperating with the Wisconsin Beekeepers' Association. The story of honey will be told on over 200 signs along the well traveled highways of the state during six weeks of the late winter months. The State Department of Agriculture operates these signs to increase the use of Wisconsin farm products. Many of our members have seen these signs carrying this message of cheese, butter, eggs, etc. It was Mrs. Harriett Grace of the American Honey Institute who first proposed to the Department of Agriculture that they devote one six week period to the message of honey. The Department agreed, the only requirement being that the State Beekeepers' Association raise $150 as its share of the expense. The total cost will run into thousands of dollars for the work of preparing the signs, lithographing them, having them put up in over 200 locations, and keeping them lighted at night. —From December, 1940, "Wisconsin Beekeeping".

[This is an idea that other states may wish to try.—Editor.]

American Honey Institute News Notes

Each month has some holiday or special occasion on which you may give variety to your honey merchandising.

February 12th—Lincoln's birthday.

February 14th—Valentine's Day.

An attractive Honey Package or Honey Candy (and we have seen packages that the industry may be proud of).

Honey Cakes—baked in heart-shaped designs.

February 22nd—Washington's Birthday—Dress up Honey Package for this occasion—cherries, hatchet, Slogan—"Honey Never Told a Lie".

March 17th—St. Patrick's Day—Shamrock.

April 13th—Easter Sunday—"Honey for Breakfast" week begins. Dress honey in Easter garb. Letters have come to the office telling us how honey in holiday garb increased the honey business.

• • •

In the December 21st BAKERS HELPER there is an attractive and most useful section on Honey Products. This publicity is of inestimable value to the honey producer as well as to the baker.

• • •

Ann Batchelder in "Line a Day" in THE LADIES' HOME JOURNAL always has something nice to say about Honey. In the February issue she says,

"Honey to sweeten that tapioca cream gives honey one more lovely use—As if it hadn't about everything already."

• • •

Esther Hauver, Madison, Wisconsin, has an article entitled "The Miracle of Honey" in the February issue of PHYSICAL CULTURE. The illustrations are engaging.

• • •

Mary Meade heads her column in a recent issue of the CHICAGO DAILY TRIBUNE "Honey Pumpkin Pie Delicious Winter Fare".

• • •

Hawaiian Pineapple Company in its advertisement in the February issue of GOOD HOUSEKEEPING has an excellent dessert recipe in which one cup of honey is called for.

20,000 People Saw This Exhibit

An exhibit at the Worcester County (Mass.) Conservation Congress. This cookery exhibit was furnished by the Women's League of the Worcester County Beekeepers' Association.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate—7 cents per counted word each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in the 10th of month preceding.

HONEY FOR SALE

CLOVER and buckwheat in sixties. Greulick & Son, Scotia, N. Y.

CHOICE white clover honey in new 60's. Noah Bordner, Holgate, Ohio.

8,000 lbs. NEW CROP, light extracted. Shirl Baker, Rodney, Michigan.

AMBER and clover honey in new 60's. George M. Sowarby, Cato, N. Y.

EXTRA QUALITY clover extracted. Howard Grimble, Holcomb, N. Y.

FANCY clover honey, case or quantity. E. J. Stahlman, Grover Hill, Ohio.

FINE clover honey, case or car. Leslie A. Davis, R. R. 2, Union City, Ind.

FOR SALE—Extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

HONEY—Light and light amber extracted. F. W. Lesser, Fayetteville, N. Y.

CHOICE MICHIGAN clover honey in new 60's. David Running, Filion, Mich.

CHOICE clover honey in 60's. R. C. Bish, successor to Moore Apiaries, Tiffin, Ohio.

FOR SALE—Fine quality clover honey in 60's. Leland Farnsworth, Davison, Mich.

FRANK RASMUSSEN, Greenville, Michigan. Fancy comb and extracted honey.

WHITE and amber honey in new, 60, 10, and 5-lb. tins. Harry T. Gable, Romulus, N. Y.

NEW CROP clover and amber honey, packed in new 60's. H. B. Gable, Romulus, N. Y.

FOR SALE—Fancy Iowa white clover extracted honey. Kalona Honey Co., Kalona, Iowa.

AMBER HONEY in new sixties, fine quality. Meyer Toom, Route 4, Knoxville, Iowa.

MICHIGAN'S finest well-ripened white honey in new 60's. Jay Cowing, Jenison, Mich.

MICHIGAN White Clover in new sixties. Orval Dilley, 345 S. Sheldon, Charlotte, Mich.

FINEST quality buckwheat honey, new 60's, 6 cents. Seward Van Auken, Duanesburg, N. Y.

HONEY in 60's; buckwheat, $3.00; amber, $3.60, F.O.B. here. William F. Vollmer, Akron, N. Y.

CLOVER HONEY in sixties and comb honey. George Eykamp, 1221 Akin, Evansville, Indiana.

ORANGE, palmetto and mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

HONEY PACKERS—Write us for prices on carload lots of California and western honeys. We stock all varieties. Hamilton & Co., 1360 Produce St., Los Angeles, California.

60 CASES fancy white comb at $3 per case of 24 4¼ sections. H. G. Quirin, Bellevue, Ohio.

AMBER HONEY, clover flavor, 7c per pound in case lots. Kenneth Gallant, Jordan, New York.

CHOICE white clover honey. Fives and sixties. Ralph Hibbard, 131 Benedict St., Watertown, N. Y.

EXTRACTED clover and amber honey. Quotations on request. Scott Traxler, Scottsburg, N. Y.

AMBER COMB honey, $2.50 case; extracted, 5½c; buckwheat, 5½c. C. B. Howard, Geneva, N. Y.

FINEST white clover extracted, liberal discount at our place, by truck. N. B. Querin, Bellevue, O.

FOR SALE—8 cases (16-60 lb. cans) of extracted clover honey at $7.20 a case. H. Stuit, Hospers, Iowa.

FOR SALE—1940 crop, white clover extracted honey in 60-lb. cans. L. S. Griggs, 711 Avon St., Flint, Mich.

MICHIGAN White Extracted in 60's. Strictly high grade in new cans. M. H. Hunt & Son, Lansing, Mich.

TUPELO HONEY, new 60's and barrels, 5 and 10-lb. buckets. Marks Tupelo Honey Co., Apalachicola, Fla.

FINEST QUALITY white clover honey, $7.00 per case, 120 lbs. Sample 10c. Arthur Thayer & Sons, Freeland, Mich.

WHITE extracted and amber, also few cases of white honey in shallow frames. Herman Crowther, Cass City, Mich.

HONEY FOR SALE—All kinds, any quantity. H & S Honey & Wax Co., Inc., 265-267 Greenwich St., New York, N. Y.

LET US show you how you can save on your honey purchases. We also buy honey. H. Blitz, P. O. Box 3452, Philadelphia, Pa.

Best INSPECTED, Michigan clover honey. A limited supply still available. E. D. TOWNSEND & SONS, Northstar, Michigan.

NEW CROP clover-basswood honey, water white in new cans. Send for sample and price. A. A. French & Son, Theresa, N. Y.

FANCY white clover extracted honey, can or carload. Price on request. Sample 15c. Jos. H. Hoehn & Sons, Ottoville, Ohio.

COMPLETE line comb and bottled honey, pure clover. Also packed in 5's and 60's. Central Ohio Apiaries, Inc., Millersport, Ohio.

SELECT LOTS white sweet clover, also processed white honey in 60-pound tins. A. I. Root Co., 224 West Huron Street, Chicago, Ill.

RASPBERRY HONEY blended with milkweed honey, two of the best honeys of Northern Michigan. Packed in 60-lb. cans, for 7c a lb. In 10-lb. cans for $2.00. We pay postage. Sample for 20c. Elmer Hutchinson & Son, Lake City, Michigan.

CHOICE white sweet clover, also extra light amber honey in new 60-pound tins by the case or carload. Dadant & Sons, Hamilton, Illinois.

10 TONS clover white extracted honey, case, ton or carload. Write for prices and sample. LEROY C. KEET, 1003 Leray Street, Watertown, N. Y.

NEW YORK State comb and extracted honey, buckwheat and clover, any quantity, all size packages. Five-pound pails my specialty. Edward T. Cary, Midland Ave. and Tallman St., Syracuse, N. Y.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTE—We will not guarantee any honey buyer's financial responsibility and advise all beekeepers to sell for cash only, or on C.O.D. terms except when the buyer has thoroughly established his credit with the seller.

WHITE and light amber extracted and comb honey. George Eykamp, 1221 Akin, Evansville, Indiana.

WANTED—White clover honey. New cans only. Clover Blossom Honey Co., 712 Kossuth St., Columbus, O.

WHITE and amber extracted and beeswax. Alexander Company, Reynolds and Dorr, Route 3, Toledo, Ohio.

WANTED.—Honey, car lots or less. Mail sample and lowest cash price. Schultz Honey Farms, Ripon, Wisconsin.

WANTED—Carlots honey; state quantity, shipping point and price. Mail sample. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—Comb, chunk comb, white and light amber extracted honey. Any amount. Central Ohio Apiaries, Millersport, Ohio.

HIGHEST cash returns made the day we receive your beeswax. Write for shipping tags and quotations. Walter T. Kelley Co., Paducah, Ky.

CASH PAID FOR carloads and less than carloads of extracted honey. Send sample and best price. C. W. Aeppler Company, Oconomowoc, Wis.

WANTED—White and amber extracted honey, any quantity, also Beeswax. Write The Fred W. Muth Co., Pearl & Walnut Sts., Cincinnati, Ohio.

WANTED—All grades of comb and extracted honey. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th St., Detroit, Mich.

CARLOADS water white, extra white clover or alfalfa extracted. Submit samples, prices. Finger Lakes Honey Producers Cooperative, Inc., Groton, N. Y.

WANTED—White clover honey in new 60-lb. cans to pick up with truck within 100 miles of Toledo, Ohio, in lots of 5 tons or less. Write. Box 11, care of Gleanings, Medina, Ohio.

FOR SALE—Fine quality queen mailing cages; Root quality bee supplies, both comb and extracted honey. Orders filled promptly. Write us or drive over M53, fifty miles north of Detroit. Hamilton Bee Supply Co., Almont, Mich.

FOR SALE

QUEENBEE PAINTING outfits $1.00 postpaid. Southwick Apiaries, Waban, Massachusetts.

BUTTERNUTS or hickory kernels, 70c lb.; black walnuts, 60c lb. C. Smola, 3824 East 127th St., Cleveland, Ohio.

Place your order for

PACKAGE BEES

headed with our

"Quality Plus" Queens

now and save

MONEY:—5% discount on orders of 50 packages or more if placed before March 1st.

TIME:—By having the bees when you want and expect them.

DISAPPOINTMENT:—By getting the kind and Quality Package you expect and are satisfied with.

Our packages were again high producers in 1940.

2-lb. package with queen, ..$2.00 each
3-lb. package with queen, .. 2.50 each
Orders for 50 or more packages placed before March 1st, 5% discount.

Nuclei prices on request. Either standard or Modified Dadant frames.

They Produce

Rossman & Long

Box 133, Moultrie, Ga.

A card puts you on our mailing list for all revised prices and literature.

Honey Crops

are not made by promises. It takes real quality packages and queens. We have them. Order early before all the best dates are taken.

	2-lb.	3-lb.	Queens
1- 25	$2.10	$2.70	$.70
25-100	1.95	2.55	.65
100- up	1.85	2.45	.60

No disease. Safe arrival and satisfaction guaranteed.

J. M. Cutts & Sons

Rt. 1, Montgomery, Ala.

What do you want

in

Package Bees

and

Queens?

Prompt Service?
High Quality?
Low Price?

We offer you all, backed by a guarantee that you must be satisfied.

Write for particulars, price list and illustrated literature. It's free.

THE PUETT CO.
HAHIRA, GA.

Quality Three-banded Italian

Bees and Queens

2-lb. pkg. with queen, ...$1.90
3-lb. pkg. with queen, ... 2.45
Queens ..... .60

Special discount on all orders for bees to be shipped before April 10th.

Dependable Service.
Book your order early.

W. O. Gibbs
Willacoochee, Ga.

Australian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the
"Australasian Beekeeper"
Subscription 5 shillings per year. Start any time. Inquire for International Money Order for five shillings (Australian) at your Post Office.
Write now to The Editor, P. O. Box 20.
West Maitland, New South Wales, Australia.

BEE candy, fine for wintering and spring, 25 to 350 lb. containers. Root Quality supplies. Frederick Russell, Chelmsford, Mass.

ATTRACTIVE prices on bee supplies and comb foundation. Send for catalog. Saves you money. The Fred W. Muth Co., Pearl and Walnut Sts., Cincinnati, Ohio.

YOUR wax worked into quality medium brood foundation for 15c pound; 100 lbs., $10.00. Fred Peterson, Alden, Iowa.

WRITE FOR CATALOG. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Onsted, Michigan.

COMB FOUNDATION at money-saving prices. Plain, wired and thin section. Wax worked at lowest rates. Comb and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

GLASSWARE, tinware, and bee supplies at factory prices. Write for quotations. Package bee headquarters for Northwestern Ohio. Alexander Company, Reynolds and Dorr, Route 3, Toledo, Ohio.

FOR SALE—Root 24-fr. Simplicity extractor, also 2-fr. hand reversing machine, practically new and cheap. Briggs & Stratton 1 h. p. air-cooled with speed reduction, $25. Fred D. Lamkin, Union Springs, N. Y.

THE ONLY complete line of wax rendering equipment ever offered—the "Perfection" Line. A size and type suitable for every commercial beekeeper. Write for descriptive circular. Robinson's Wax Works, Mayville, N. Y.

SAVE MONEY by letting us work your wax into wired or regular comb foundation. Large catalog describes everything. You pay only wholesale factory prices, as we have no agents. Walter Kelley Co., Paducah, Kentucky.

FOR SALE—My irrigated truck farm including 120 colonies of bees, located in the beautiful Taos Valley, Taos, N. M. Reason for selling is my age. Bees are guaranteed free from disease. G. O. Ainsworth, 1638 E. Bennett St., Compton, Cal.

8 BASSWOOD seedlings, or 10 RUSSIAN OLIVE—2-foot, or 6 PINK HONEYSUCKLE shrubs, or 8 JAPANESE BARBERRY, or 25 CARAGNA (hedging)—1 foot, or 3 transplanted BASSWOOD 3-foot, or 2 transplanted PUSSYWILLOW (early spring pollen), 3-foot—nectar producers, postpaid for $1.00 bill. Checks require 10c exchange. Local Lewis-Dadant Dealer. Nicollet County Nursery, St. Peter, Minnesota.

BEES AND QUEENS FOR SALE

PACKAGE Bees. Satisfaction guaranteed. Sternenberg Bros., Lockhart, Texas.

60 CENTS EACH for bright three-band young Italian queens. D. W. HOWELL, Shellman, Georgia.

CAUCASIAN package bees and queens, 1941. Write for prices. Lewis & Tillery Bee Co., Greenville, Ala.

FOR SALE—Forty colonies of bees. Free from disease. State inspected. Write H. W. Coley, Sarasota, Florida.

YOUNG, pure leather-colored Italian package bees and queens. Write for prices. Jasper Knight, Hayneville, Ala.

CAUCASIAN Package Bees. Reduced price but same high quality. Long-tongued, gentle, prolific, dependable workers. 2-pound package bees with queen, $2.00; 3-pound package, with queen, $2.50. Safe arrival and satisfaction guaranteed. P. B. Skinner Bee Co., Greenville, Ala.

ITALIAN QUEENS. W. G. Lauver, Middletown, Pa.

GOOD ITALIAN QUEENS. White Pine Bee Farms, Rockton, Pa.

BEE MEN—Bring your cages. We fill with bees at 35c per pound. Write us. Elevation Apiaries, Milano, Texas.

THREE-BANDED Italian bees and queens for 1941. Write for our circular. Alamance Bee Company, Graham, N. C.

QUEENS and package bees, very reasonable; starting shipping about March first. Write for prices. D. P. Green, Deland, Fla.

YES, SIR, Write for 1941 special price on Golden and Italian package bees with or without queens. Address, Hessmer Bee Farm, Hessmer, La.

140 HIVES BEES, inspection certificate furnished when sold. 500 deep supers. Located Dancy, Wisconsin. Strickler's, Pascagoula, Mississippi.

QUEENS and package bees. Very reasonable. Start shipping about April the first. Write for prices. Plantersville Apiaries, Plantersville, Miss.

FOR SALE—Bees, 18 colonies standard frames including 36 comb honey supers. Bees guaranteed free from disease. W. E. Carpenter, Greenwich, Ohio.

PACKAGE BEES—Early Spring Delivery. Three-Band Italians. Prices reasonable. No disease. Honest dealings. Write us your needs. Crenshaw County Apiaries, Rutledge, Ala.

MARCH queens, packages, and nuclei from our Florida bees. Disease free, best Northern stock, competitive delivered prices. Discount for early orders. Coggshall & Son, Groton, N. Y.

CAUCASIANS—Tested queens, $2; untested, $1; 10, 75c; 50, 65c; 2-lb. packages with queens, $2; 3-lb. packages, $2.50. Miller's Caucasian Apiaries, Three Rivers, Texas. Oldest exclusive Caucasian breeders west of the Mississippi.

SUNNY-LAND QUALITY PACKAGE BEES, three-banded Italians. Prompt shipment from South. No increase in price. Write or wire us your needs. S. T. Roach, 2960 Queen St., Dearborn, Mich. Tel. No. 1928W.

THE NORMA ROY and Son Apiaries. Italian bees on standard frame brood, 2 pounds with queen, 1 frame, $2.00; 3 pounds with queen, 1 frame, $2.50. A health certificate with shipment. Norma E. Roy and Son, Hessmer, Louisiana.

QUALITY 3-band "Honey Girl" Italians—carefully reared queens, northern production tested stock. Package bees with queen introduced and a comb of brood, 2-pound package, $2.45; 3-pound package, $2.95. Combless packages with queen caged, 2-pound package, $2.25; 3-pound package, $2.75. Additional comb of brood, 50 cents each. Additional pound of bees, 50 cents each. No discounts. Satisfaction guaranteed. No disease, full weight, safe arrival. Certificate of inspection with each shipment. 10% deposit to book order and reserve shipping date in advance. Shipping begins April 1st. A. D. St. Romain Apiaries, Diamond, Louisiana.

GOOD COMBLESS PACKAGE BEES AND QUEENS. The choice of many leading beekeepers of the U. S. and Canada. Outstanding records for honey production. Gentle, well bred, three-banded Italians. New cages—full weight packages—select young laying queens—no drones—no dis-

Mountain Gray Bees and Queens

Write us now how many packages of bees or queens you will need for spring delivery. We sold more bees and queens last season than ever before, yet could not fill all orders coming to us. Try us again. Bees and queens guaranteed to please; no disease. Prices, 2-lb. pkg. with queen, $2.25; 3-lb. pkg. with queen, $3.00; queens, 75c. 15% discount to dealers and large buyers.

Bolling Bee Co.

Bolling, Alabama

FOR SALE!

Italian Bees and Queens. Nothing but the best Bright Yellow and Three-band.

Queens 50c each

1-lb.	Bees with young queen	$1.25
2-lbs.	Bees with young queen	1.75
3-lbs.	Bees with young queen	2.25

Discount on 10 or more packages.
You send for them, they go.

Graydon Bros.

Route 2, Greenville, Ala.

Improved Select Italian Package Bees-Queens

A pleasure to work, and outstanding Honey-Getters. Selected for Maximum Crops, Hardiness, Gentleness, Non-Swarming, and Size.

PROMPT SHIPMENT and SAFE ARRIVAL Guaranteed.
Write For 1941 Prices.

R. B. HERIER CO.
Valdosta, Ga. U. S. A.

PURE ITALIAN BEES

If you are in the market for package bees in 1941, and want the best for your money, then you owe it to yourself to try my pure Italian Bees.

2 lbs. bees and young laying queen..$1.98
Extra Queen ..... .60

10% discount to dealers.

J. P. CORONA
P. O. Box 124, Kenner, La.

XUM

WHY?

We are prepared to render better service—

Quality—
Quantity—
Experience—

We believe experience to be a good teacher. With 20 years' experience in queen rearing and package shipping, and 6000 nuclei and 3000 colonies to draw from, we are prepared to give you quality bred queens and bees.

Can furnish—

Light or dark Italian queens and bees.

We furnish health certificate with all shipments, prompt delivery, full weight packages and young queens. We guarantee safe arrival and satisfaction—

—Prices—

2-lb. pkg. with queen, ...$2.00
3-lb. pkg. with queen, ... 2.65
Mated queens, each ..... .60

(Write for quantity discount.)

The Ideal Apiaries
Estill, S. C.

Attention!

We are booking orders now, on a limited quantity of 2-lb. packages at $1.40 each. This offer will close March 15. Satisfaction guaranteed.

THE CLOVER BEE FARM
Hessmer, La.

If You Want Your Bees When You Want Them Write Us

We have as nice a lot of bees as we have ever had. Winter conditions so far have been ideal.
Prices will be just as low as quality will permit.
Prompt, careful, honest and courteous service. Good Italian Stock.

SULLIVAN, WRIGHT & CO.
Gilbertown, Alabama

PATENTS & TRADEMARKS
Williamson & Walton
Munsey Building
Washington, D. C.

ease. 2-lb. pkgs. with queen, $2.45 each; 20 or more, $2.30 each; 50 or more, $2.15 each; 100 or more, $2.00 each. 3-lb. pkgs., $3.15 each; 20 or more, $3.00 each; 50 or more, $2.85 each; 100 or more, $2.00 each. If wanted by mail, postage must be added. Select young laying queens, 75c each; 20 or more, 70c each; 50 or more, 65c each; 100 or more. 60c each; postpaid. Our shipping season opens April 10th. Order early and have shipping time reserved. We have one of the largest, best equipped queen and package establishments in the South. H. C. Short, Fitzpatrick, Ala.

HELP WANTED

WANTED—Experienced queen breeder, also helpers for caging packages. J. E. Wing & Son, Cottonwood, Calif.

YOUNG man of good health and habits to assist in commercial apiaries. Archie L. Coggshall, Ithaca, New York.

HELP WANTED—One experienced man and one helper for coming season. Good opportunity for good help. M. E. Ballard, Roxbury, N. Y.

TWO industrious young men with some experience for coming season. State age, height, wages expected, etc. Carl Soder, Stratford, Iowa.

WANTED—A young man under registration age, of good habits, to work bees. Must be experienced driver. Paul Wilson, Westwood, California.

WANTED—An experienced beeman also helper coming season. Fred D. Lamkin, Union Springs, N. Y.

WANTED—Young experienced beeman, with clean habits. Give age, weight, height, and references in first letter. C. H. Schader, Sunnyside, Wash.

INDUSTRIOUS young man of good habits and some experience for coming season. Room and board furnished. State full particulars first letter. Coggshall and Son, Groton, N. Y.

WANTED—Man to take full charge of production of comb and extracted honey. Must be dependable and understand bees. Wm. March, 12801 Woodland Ave., Cleveland, Ohio.

WANTED—Reliable young man of good habits, to assist in our apiaries. Room and board furnished. State experience and full particulars. N. L. Stevens & Son, Venice Center, N. Y.

YOUNG BEEMAN with clean habits to work in commercial apiaries. Give personal information, experience, references, and wages expected; room, board furnished. Elton Lane & Son, Trumansburg, N. Y.

INDUSTRIOUS young man with good health, habits and some experience for coming season. State age, weight, ability, wages expected, and references. Board, room furnished. Lavern Depew, Auburn, N. Y.

SEEDS

SEEDS of honey plants. Attractive wild plants for waste lands, ornamentals for flower garden and unusual forage crops. Send for circular. Pellett Gardens, Atlantic, Iowa.

WANTED—Two young men for apiary work in apiaries extending from Forida to Ohio of several thousand colonies, for bee shipping and honey production. Steady employment. Give references, experience and wage expected. Hyland Apiaries & Factory, West Elkton, Ohio.

KOREAN Lespedeza, high quality, $1.75 bu. Hardy Alfalfa, $8.90. Grimm, $9.90. Timothy, $2.00. Sweet Clover, scarified, $2.70. Clover, $7.80. Triple cleaned. Guaranteed satisfactory. Certified Hybrid Corn, $2.00. Write for free samples. Catalog. Frank Sinn, Box 482, Clarinda, Iowa.

WANTED TO BUY

WANTED TO BUY—Bees and equipment. Keith Magers, Augusta, Kans.

EXTRACTOR and tanks. Milton Stanius, Hinsdale, Ill.

WANTED—Bees, also empty equipment in middle west. W. Weldon, Moorhead, Iowa.

WANTED—100 10-frame hives of bees, also 10-frame extracting supers. Harold Garber, Tipp City, R. 1, Ohio.

MAGAZINES

MICHIGAN BEEEKEPER. The State Bee Magazine with a National Circulation. 50c a year. MICHIGAN BEEKEEPER, Rt. 3, Lansing, Michigan.

DAIRY GOAT JOURNAL, Dept. 419, Fairbury, Nebr. (big monthly magazine, 3 years $1), gives complete information. Introductory 5 months, 10c.

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy free. Yearly 7c6d. Apply Editor, Indian Bee Journal. Jeolikote, Dist. Nainital, U. P. India.

READ the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars, write to the Hon. Treasurer, P. O. Box 43, Cleveland, Johannesburg, S. Africa.

AMERICAN POULTRY JOURNAL, 567 South Clark, Chicago, features colored pictures of poultry and common poultry diseases supplementing valuable information enabling you to increase profit. Six months 10c, two years 25c.

MANY beekeepers have proven raising fox, mink, nutria, muskrats, rabbits, highly profitable. Send dime for sample copy Canada's oldest fur farming magazine telling how. Fur Trade Journal of Canada, Box 31, Toronto, 2, Ontario.

THE BEE WORLD—The leading journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free, 12 cents stamps. Membership in the Club, including subscription to the paper, 10/6. The Apis Club, L. Illingworth, The Way's End, Foxton, Royston, Herts, England.

Make 1941 More Prosperous

Use our three-banded bees and queens and assure yourself of getting the best bees obtainable. Selected young laying queens. 100% safe delivery. A strain of bees selected and bred for superior quality since 1919. Write for our reasonable prices.

N. B. Smith & Company
Calhoun, Alabama

A Hint to the Wise

Do you want your package bees to reach you on time and containing full weight of young bees—headed with as good queen as is possible for a breeder of 19 years' experience and a love for the business, to raise?
Then place your order with a shipper who thinks that you know what you need, and when you want it—a shipper who needs new customers, but values one repeat order above two new ones.
Where 24 hours is considered a long delay, 3 days a tragedy, and one week has never happened to a package order, if booked in advance.
2% per day will be refunded on all orders after 48 hours from date booked.
If this suits you and you like Italian bees, would appreciate hearing from you.

A. E. SHAW, Shannon, Miss.

Quality Package Bees

No one can beat our Prices
Quality Considered

J. E. WING & SONS
Cottonwood, Calif.

Pettit's Package Bees with Queens

You Must Be Satisfied **Best Young Queens**
Gentle Workers **No Drones**

Quantity	Twos Each	Threes Each	Fours Each	Fives Each	Extra Queens Each
1-11	$2.45	$3.15	$3.85	$4.55	$ .75
12-23	2.30	2.95	3.60	4.25	.70
24-49	2.15	2.75	3.35	3.95	.65
50-up	2.00	2.55	3.10	3.65	.60

Our best friends are satisfied customers.
Cash before shipping.

Safe arrival and satisfaction guaranteed.
Never before were we so well prepared to give service.

Morley Pettit, Tifton, Georgia, U. S. A.

XUM

Package Bees and Queens

Three-banded Leather-colored Italians

One Customer writes:

"I am pleased to say that your bees are far superior to the others received this spring. Your bees are darker but are gentle and easy to handle. It seems to me they are more hardy in our cold climate and build up earlier with far less supersedure."

You, too, can get good results from our packages.

Two pound packages with queens, ...	each $2.00
Three pound packages with queens, ...	each 2.50
Select untested queens	each .70

Write for prices on lots of 10 to 1000 packages.

The Crowville Apiaries, Winnsboro, Louisiana

J. J. Scott, Prop., Rt. 1.

THREE-BANDED ITALIAN BEES AND QUEENS

In addition to our famous three-banded Italians, we are this year breeding from daughters of queens that have proven their resistance to AFB.

Prices: 3-lb. pkgs.	1- 10	$2.75	2-lb. pkgs.	1- 10	$2.15
	1- 25	2.65		1- 25	2.05
	1- 50	2.55		1- 50	1.95
	1-100	2.50		1-100	1.85

Full weight packages shipped on time. Satisfaction guaranteed.

STRACENER APIARIES, Prairieville, La.

Only 35 copies of the ABC and XYZ of Bee Culture left---each $1.00

We have a few copies of the 1935 edition that we will sell for $1.00 postpaid. Send your order at once.

THE A. I. ROOT CO., MEDINA, OHIO

Solicit Subscriptions

Among Your Beekeeping Friends

A number of persons have written us for our offer to reliable persons. However, we still have a few localities where the right person can secure a number of subscriptions.

Write for sample copies.

Give references.

Circulation Manager
Gleanings in Bee Culture
Medina, Ohio

HONEY FOR BABIES

(Continued from page 77)

		10 drops Cod liver oil*. 1 oz. Orange juice*.
2 Months	12 lbs. 4 oz.	Same.
3 Months	14 lbs. 23¼"	18 oz. Grade A Milk. 9 oz. Water. 4 tablespoons Honey. 15 drops oil*. 1 oz. Orange juice*.
4 Months	16 lbs. 3 oz.	Same.
5 Months	17 lbs.	24 oz. Milk. 10 oz. Water. 3 tablespoons Honey. 15 drops oil*. 2 oz. Orange juice*.
6 Months	18 lbs. 28"	Same.
7 Months	19 lbs.	Same with cereal and vegetables added.
9 Months	20½ lbs.	30 oz. Milk. 10 oz. Water. 3 tablespoons Honey. Cereal and vegetables.
12 Months	23½ lbs.	Same.
13 Months	24½ lbs.	General diet with Honey on cereal, etc.

*Given separately.

Figuring a tablespoon of honey as one ounce, the consumption of honey per month was as follows:

1st Month	30 x 3 ÷ 16	5 lbs. 10 oz.
2nd Month	same as first	5 lbs. 10 oz.
3rd Month	30 x 4 ÷ 16	7 lbs. 8 oz.
4th Month	same as third	7 lbs. 8 oz.
5th Month	same as first	5 lbs. 10 oz.
6th Month	same as first	5 lbs. 10 oz.
7th Month	same as first	5 lbs. 10 oz.
8th Month	same as first	5 lbs. 10 oz.
9th Month	same as first	5 lbs. 10 oz
10th Month	same as first	5 lbs. 10 oz.
11th Month	same as first	5 lbs. 10 oz
12th Month	same as first	5 lbs. 10 oz.
Total First Year		71 lbs.

Note: Amount of honey reduced to 3 tablespoons a day after the fourth month because the bowel movements were ample with the smaller amount. No other added sugar of any kind allowed.

York's Package Bees and Queens

Quality Bred Italians

The past season was our greatest with an exceedingly heavy demand. A hearty thanks to all of our customers for making this possible. Orders were handled satisfactorily as we had ample bees to take care of the increased demand and delays were negligent. Did you place your orders right or did you lose valuable time and money on delays?

We will be better prepared than ever to handle your requirements for any quantity plus quality and service at the right price. Booking orders now for spring delivery.

York Bee Company

Jesup, Georgia, U. S. A.

(The Universal Apiaries)

Southern Mississippi Italian Bees and Queens

Package Bees and Queens reared on natural honey flow. Real Three-banded Italian. Our service for 1940 was 100%. All orders shipped on time. No delay. Satisfaction guaranteed. Fast service. Young baby bees. Light weight cages. Over-weight packages. Regularly inspected. No disease. We are booking orders for spring delivery without deposit. Write for prices.

LUCEDALE APIARIES

Lucedale, Mississippi

LOW PRICES FOR 1941

on the finest bee supplies, and foundation made. Send for our price list. Ship us your old comb and cappings for rendering into wax. Let us work your wax into comb foundation. This means quite a savings to you. We are always buying beeswax, also extracted or comb honey. Write us.

THE FRED W. MUTH CO., 229 Walnut Street, Cincinnati, Ohio

XUM

Burleson's Package Bees & Queens for Spring, 1941

We are in our 7th year program of improving our strain of Italian bees in cooperation with Geo. N. Polhemus, Ames, Iowa.

It takes much time and money to improve a beef or dairy herd or any other animal or fowl, and you would not expect to get such improved stock or fowls at the same price as the ordinary; so it is with our strain of bees.

This season all the drones selected for mating will be of this same breed.

While at first I am higher in price than most others, yet when the honey is harvested you will find my prices are cheaper.

One 1940 customer writes, "My crop is harvested and my average was 267 pounds. I value your 3 pound package and queens of this strain at $5.00 each compared with any others secured or observed. I suggest that you do not lower the quality or price just to meet competition".

Write at once for descriptive folder and prices as our old customers have already contracted for over 50% of our output.

It is not necessary for me to spend money advertising to sell these bees and queens; so, this ad will not appear again.

T. W. BURLESON, WAXAHACHIE, TEXAS

LEST YOU FORGET

the good rule to go by. Buy your

Italian Bees and Queens

from

Alabama Apiaries

Mt. Pleasant, Ala.

2-lb. packages with queens, ...$2.25
3-lb. packages with queens, ... 3.00
Queens, ... .65

No order too small or too large. We are in position to make prompt shipments. Our aim—once a customer always a customer.

HELLO, FOLKS

HERE WE ARE AGAIN!

Stevenson's Line-bred Goldens

We are large, the best of honey producers and so gentle that it is a real pleasure to work with us. We are not nervous and best of all do not swarm until the hive is well filled; and we fill it, too, so keep plenty of room.

Our queens are large, uniform, and very prolific. Not subject to supersedure.

Why fight all summer when it isn't necessary? We take the sting right out of beekeeping.

Write for descriptive price list.
No price advance.

STEVENSON'S APIARIES
Westwego, La.
The home of REAL QUALITY GOLDENS

BERNELL'S PACKAGE BEES and QUEENS

2-lb. $2.00
3-lb. 2.50
Queens ..... .60
Discount to Dealers

THREE-BANDED ITALIANS.

R. L. BERNELL
Rt. 4, Box 270,
NEW ORLEANS, LA.

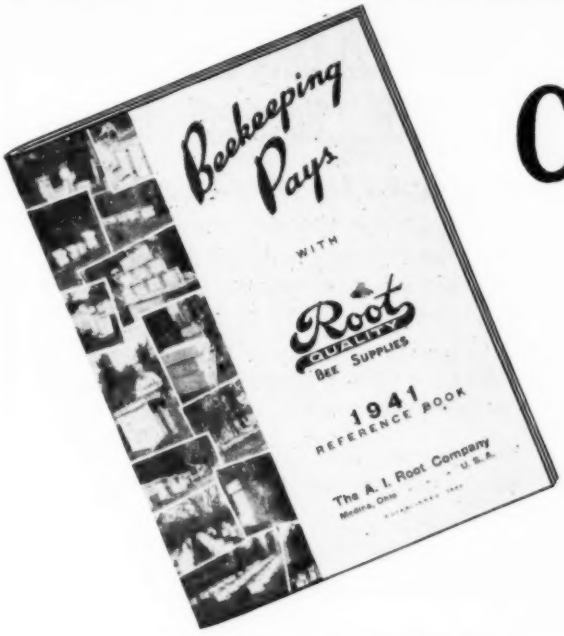
Queens and Packages Caucasians Italians

For years we have been filling orders on time. If you have foulbrood in your apiary try some of our queens of Government resistant stock. One customer wrote he was going to requeen all of his 3000 colonies this year with queens from resistant stock. We do not guarantee these queens to be 100% resistant to AFB.

Early March Queens $1.00 each, April Queens 60c each.
2-lb. pkg. bees with queen $2.25 each, 3-lb. and queen $2.95 each

Paying 30c pound for beeswax in exchange for bees and queens, ship wax direct to Dadant & Sons, Hamilton, Ill. and write us about it. We do lots of trading, what have you? Honey WANTED. Circular FREE. Truckers Head Quarters Rio Grand Valley, on Progresso Highway.

BLUE BONNET APIARIES, R. 1, Box 70, Mercedes, Tex.



Catalog for 1941

You will find the new 1941 Root Bee Supply Catalog to be even better than before.

It contains over 4000 words of valuable instruction on how to use beekeeping equipment properly and also on how to handle bees.

The Beekeepers' Calendar on page 6 will be a big help to beginners.

Your purchase of Root Quality Bee Supplies guarantees you that we will give you free the best advice possible on all beekeeping questions.

BEE SUPPLIES WITH THAT PLUS SERVICE

for which Roots are noted.

Root QUALITY BEE SUPPLIES

Make your purchase slip for Root Bee Supplies help you to success.

Root QUALITY Bee Supplies

XUM

2 Lines Garon's Progeny-Test Three-Banded Italians Garon's A.F.B. "Resistant" Stock

Our Progeny-Test Three-Banded Italians are selected and tested by our Famous Progeny-Test Method.

Our AFB "Resistant" Stock has been propagated for Resistency for several years in the North and selected individuals sent to us for further selection and improvement.

Our two Breeds will be ready in plenty of time for Early Spring Delivery. **BUY FINE QUALITY BEES PLUS UTMOST SERVICE.** Send for your free copy of our Descriptive Circular.

—Prices—

2-lb. Pkg. with Queen		Single Queen	3-lb. Pkg. with Queen	
1 to 25	$2.10	$ .70	1 to 25	$2.75
26 to 99	1.90	.65	26 to 99	2.55
100 or more	1.85	.60	100 or more	2.50

Add 10c per package or queen for Resistant Stock.

GARON BEE COMPANY **Donaldsonville, Louisiana**

Dixieland's
Leather-colored
Italians

The best stock of Leather-Colored Italians—Queens and package bees. Our strain has been improved through years of testing and selecting queens from imported stock and our own improved American stock of bees. This combination makes a very gentle and the very best honey producers that can be had.

2-lb. pkg. with selected queen $2.00
3-lb. pkg. with selected queen 2.50
4-lb. pkg. with selected queen 3.00
Selected untested queens, each ... .60
Write for prices on larger lots.

Book your order now and reserve your shipping date. Once we fill your orders, you will always be satisfied with our prompt service, full weight, low supersedure, and safe arrival.

You must be satisfied.

Dixieland Apiaries
Greenville, Alabama

INSULATION VS. NO INSULATION

(Continued from page 86)

three or four inches square, and increase up to March. The last issue of "The Bee World" page 116, explains that winter brood-rearing has been recognized in Germany for years as a normal function.

Our final quotation is from a recent letter written by Dr. Phillips: "It does not worry me that you and I do not always agree for I hope both of us are big enough to take it." With this spirit in mind Father Time will help us to sift out the truth. "It is better to debate a question without settling it than to settle it without debate".

CARNIOLANS CAUCASIANS

Very gentle, very prolific, hardy, northern bred. Some wonderful production records in U. S. and Canada. Free paper. Packages and queens in season. Ask for prices and early order discounts. Located nearer eastern states and southern Canada. Less transportation charges.

ALBERT G. HANN, Glen Gardner, N. J.

WINTERING IN CANADA

(Continued from page 89)

has shown that honey of 17.4 per cent moisture will absorb further moisture from the air if the relative humidity is above 58 per cent. If the air in the hive is allowed to become saturated then it is only reasonable to assume that some of the moisture will be absorbed by the honey. I am inclined to think that the moisture given off by the bees has been largely responsible for past winter losses, simply because little or no provision has been made for it to escape from the case as well as from the hive itself.

An important part of winter protection is, of course, shelter from cold driving winds. A good windbreak on all four sides of the apiary is of extreme importance and is worth more than several inches of extra packing.

1. Braun, Erdman—1936. Package Bees in Manitoba. Publication 522, Dominion of Canada, Dept. of Agr.
2. Alfonsus, Erwin C.—1935. The Cause of dysentery in Honey Bees. Jour. Ec. Ent. 28:2.568.
3. Martin, E. C.—1939. The Hygroscopic Properties of Honey. Jour. Ec. Ent. 32:5. 660.

Ottawa, Canada.

Caucasians
Italians

Were You Satisfied

with the packages and queens you purchased last season? Was the service as good as you had a right to expect? If not, write

Weaver Apiaries

Navasota, Texas

Carniolans Leading

Carniolans are leading in honey production, in gentleness, and build up early in the spring. INCLUDE CARNIOLANS in your plans for 1941. Write:

EPHARDT'S HONEY FARMS, TORRAS, LOUISIANA

BETTER-BRED QUEENS Three-banded Italians

Who will win the war? What will civilization be like when it is over? Will democracy stand? These are important questions, hard to answer. We cannot answer them, but we do know our bees and queens have pleased thousands throughout the United States and Canada. Let us send you our circular and price list and be among our many satisfied customers.

CALVERT APIARIES, CALVERT, ALABAMA

GASPARD'S QUALITY

Golden and Three-banded Italian Queens and package bees for spring 1941 delivery. Over 20 years' experience which assure you of prompt and efficient service. Book your order now and reserve shipping date. 10% will book your order, balance at shipping time. Prices as follows: (Combless Packages with Queens)

2-lb. package with queen	$2.00 each
3-lb. package with queen	2.50 each
4-lb. package with queen	3.00 each
(Comb packages with queens)	
2-lb. package with queen and one extra frame of brood	$2.25 each
3-lb. package with queen and one extra frame of brood	2.75 each
4-lb. package with queen and one extra frame of brood	3.25 each

25 to 49 packages 10% discount, 50 or more 15% discount.

Address J. L. GASPARD, Hessmer, La.

XUM

Caucasian Apiaries

Brooklyn, Ala.

Home of genuine Mountain Gray Caucasian bees. They are disease resistant, individual bees have longer life span, go afield earlier, and stay at it later.

Write for prices.

We solicit your business, be it for a single queen bee or a truck load of package bees.

Reliable Service

Reliable Package Bees and Queens

Three-band Italian Bees and Queens

Price list, Via Express Collect. All prices subject to change with ten days notice.

	2-lb. pkgs.	3-lb. pkgs.	4-lb. pkgs.	5-lb. pkgs.	Queen
1 to 24	$2.10	$2.75	$3.40	$4.00	$.65
25 to 99	$1.95	$2.55	$3.15	$3.75	$.60
100 or more	$1.80	$2.35	$3.10	$3.45	$.55

Prices via mail on package bees quoted on request. Pure mating, safe arrival, prompt shipment and quality bees and queens guaranteed.

W. E. HARRELL
Hayneville, Alabama

INDEX TO DISPLAY ADVERTISEMENTS

Alabama Apiaries 124
American Bee Journal 67
Australasian Beekeeper 118
Beekeepers' Item 67
Benton, Ralph 71
Bernell, R. L. 124
Blue Bonnet Apiaries 124
Bolens 71
Bolling Bee Co. 119
Burleson, T. W. 124
Caucasian Apiaries 128
Citronelle Bee Co. 68
Clover Bee Farm 120
Corona, J. P. 119
Crowville Apiaries 122
Cutts & Sons, J. M. 117
Dadant & Sons 72
Dixieland Apiaries 126
Ephardt's Honey Farms 127
Falconer Mfg. Co. 70
Garon Bee Co. 126
Gaspard, J. L. 127
Gibbs, W. O. 118
Graydon Bros. 119
Hann, Albert G. 126
Harrell, W. E. 128
Herier Co., R. B. 119
Hunt & Son, M. H. 67
Ideal Apiaries 120
Kelley Co., The Walter T. 70
Kitselman Bros. 71
Lotz Co., August 70
Lucedale Apiaries 123
Magazine Mart 67
Muth Co., The Fred W. 123
Pettit, Morley 121
Puett Co. 118
Root Co., The A. I. ..... Back cover, ... Inside front cover, 125
Root Co. of Chicago, A. I. 66
Root Co. of Indianapolis, A. I. .. 70
Root Co. of New York, A. I. 66
Root Co. of Norfolk, A. I. 71
Root Co. of Syracuse, A. I. 66
Rossman & Long 117
Schmidt, Oscar H. 66
Shaw, A. E. 121
Smith & Co., N. B. 121
Stahelin's Nursery 70
Stevenson's Apiaries 124
Stover Apiaries ... Inside back cover
Stracener Apiaries 122
Sullivan, Wright & Co. 120
Weaver Apiaries 127
Williamson & Walton 120
Wing & Son, J. E. 121
Woodman Co., A. G. 71
York Bee Co. 123